DECEMBER 1985

ISSN 0 378-4371

PHYSICA A

EUROPHYSICS JOURNAL

Theoretical and Statistical Physics

MASTER INDEX

VOLUMES 121A–130A
AUGUST 1983–APRIL 1985

PHYSA MASTER INDEX 121A–130A

NORTH-HOLLAND AMSTERDAM

PHYSICA A, PHYSICA B+C and PHYSICA D are published by North-Holland Physics Publishing, Amsterdam.
North-Holland Physics Publishing is a division of Elsevier Science Publishers B.V., Amsterdam.

General editorial committee: P. FULDE, Stuttgart
N.G. VAN KAMPEN, Utrecht
P.R. WYDER, Nijmegen

PHYSICA A

Editors: H.W. CAPEL, Instituut voor Theoretische Fysica, Universiteit van Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, The Netherlands
I. OPPENHEIM, Massachusetts Institute of Technology, Department of Chemistry, room 6-221, Cambridge, Massachusetts 02139, USA

Advisory editorial board:

J.J.M. BEENAKKER, Leiden
D.D. BETTS, Halifax
J. DE BOER, Amsterdam
N.N. BOGOLUBOV Jr., Moscow
E.G.D. COHEN, New York
M. DRESDEN, Stony Brook
S.R. DE GROOT, Amsterdam
D. TER HAAR, Oxford
N.G. VAN KAMPEN, Utrecht
P.W. KASTELEYN, Leiden
K. KAWASAKI, Fukuoka
J. KESTIN, Providence
I.M. KHALATNIKOV, Moscow
J.M.J. VAN LEEUWEN, Delft
J. VAN DER LINDEN, Leiden
M. NAUENBERG, Santa Barbara
I. PRIGOGINE, Brussels
D. RUELLE, Bures-sur-Yvette
J.V. SENGERS, College Park, Md.
H.E. STANLEY, Boston
P. SZEPFALUSY, Budapest
C.J. THOMPSON, Melbourne
N.J. TRAPPENIERS, Amsterdam
J. VLIEGER, Leiden
B. WIDOM, Ithaca
D.N. ZUBAREV, Moscow

Technical editor: P. TEL, North-Holland Physics Publishing, P.O. Box 103, 1000 AC Amsterdam, The Netherlands – Telex 10704 ESPOM NL

SUBSCRIPTION DATA. All prices are **inclusive** of postage and handling. The Dutch Guilder price is definitive; the currency equivalent is for your guidance only.

PHYSICA A: The subscription price per volume of about 640 pages is Dfl. 304.00 ($104.75). For 1986 5 volumes PHYSICA A are announced at a total price of Dfl. 1520.00 ($524.25). PHYSICA A is published monthly.
PHYSICA B+C: The subscription price per volume of about 432 two-column pages is Dfl. 304.00 ($104.75). For 1986 5 volumes PHYSICA B+C are announced at a total price of Dfl. 1520.00 ($524.25). PHYSICA B+C is published monthly.
PHYSICA D: The subscription price per volume of about 432 two-column pages is Dfl. 304.00 ($104.75). For 1986 5 volumes PHYSICA D are announced at a total price of Dfl. 1520.00 ($524.25). PHYSICA D is published monthly.
PHYSICA A, PHYSICA B+C and PHYSICA D: The total price of a combined subscription (15 volumes in all) is Dfl. 3915.00 ($1350.00). The subscription price per volume is Dfl. 261.00 ($90.00).
Subscriptions should be sent to the publishers, Elsevier Science Publishers B.V., Journals Department, P.O. BOX 211, 1000 AE Amsterdam, The Netherlands, or to any subscription agent.
Journals are sent by surface delivery to all countries, except the following countries where SAL air delivery (Surface Airlifted Mail) is ensured: USA, Canada, Japan, Australia, New Zealand, The People's Republic of China, Israel, India, Brazil, Malaysia, Singapore, South Korea, Taiwan, Pakistan, Hong Kong, South Africa. Air mail rates for other countries are available upon request.
Claims for missing numbers should be made within three months of their publication. The publishers only expect to supply missing numbers free when losses have been sustained in transit and when stocks permit.

Elsevier Science Publishers B.V. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, Elsevier Science Publishers B.V. (North-Holland Physics Publishing Division), P.O. Box 103, 1000 AC Amsterdam, The Netherlands.
Special regulations for authors. – Upon acceptance of an article by the journal, the author(s) will be asked to transfer copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information.
Submission to this journal of a paper entails the author's irrevocable and exclusive authorization of the publisher to collect any sums or considerations for copying or reproduction payable by third parties (as mentioned in article 17 paragraph 2 of the Dutch Copyright Act of 1912 and in the Royal Decree of June 20, 1974 (S. 351) pursuant to article 16b of the Dutch Copyright Act of 1912) and/or to act in or out of Court in connection therewith.
Special regulations for readers in the U.S.A. – This journal has been registered with the Copyright Clearance Center, Inc. Consent is given for copying of articles for personal or internal use, or for the personal use of specific clients. This consent is given on the condition that the copier pays through the Center the per copy fee stated in the code on the first page of each article for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. The appropriate fee should be forwarded with a copy of the first page of the article to the Copyright Clearance Center, Inc., 27 Congress Street, Salem, MA 01970, U.S.A. If no code appears in an article, the author has not given broad consent to copy and permission to copy must be obtained directly from the author. All articles published prior to 1981 may be copied for a per-copy fee of US $2.25, also payable through the Center. (N.B. For review journals this fee is $0.25 per copy per page.) This consent does not extend to other kinds of copying, such as for general distribution, resale, advertising and promotion purposes, of for creating new collective works. Special written permission must be obtained from the publisher for such copying.

Printed in The Netherlands

PHYSICA A

GENERAL EDITORIAL COMMITTEE PHYSICA

P. FULDE, Stuttgart
N.G. VAN KAMPEN, Utrecht
P.R. WYDER, Nijmegen

ADVISORY EDITORIAL BOARD PHYSICA A

J.J.M. BEENAKKER, Leiden
D.D. BETTS, Halifax
J. DE BOER, Amsterdam
N.N. BOGOLUBOV Jr., Moscow
E.G.D. COHEN, New York
M. DRESDEN, Stony Brook
S.R. DE GROOT, Amsterdam
D. TER HAAR, Oxford
N.G. VAN KAMPEN, Utrecht
P.W. KASTELEYN, Leiden
K. KAWASAKI, Fukuoka
J. KESTIN, Providence
I.M. KHALATNIKOV, Moscow
J.M.J. VAN LEEUWEN, Delft
J. VAN DER LINDEN, Leiden
M. NAUENBERG, Santa Barbara
I. PRIGOGINE, Brussels
D. RUELLE, Bures-sur-Yvette
J.V. SENGERS, College Park, Md.
H.E. STANLEY, Boston
P. SZEPFALUSY, Budapest
C.J. THOMPSON, Melbourne
N.J. TRAPPENIERS, Amsterdam
J. VLIEGER, Leiden
B. WIDOM, Ithaca
D.N. ZUBAREV, Moscow

DECEMBER 1985

PHYSICA A

EUROPHYSICS JOURNAL

Theoretical and Statistical Physics

Editors:

H.W. CAPEL
Amsterdam, The Netherlands

I. OPPENHEIM
Cambridge, Massachusetts, USA

MASTER INDEX

VOLUMES 121A–130A
AUGUST 1983–APRIL 1985

NORTH-HOLLAND PHYSICS PUBLISHING
AMSTERDAM

© Elsevier Science Publishers B.V. (North-Holland Physics Publishing Division) 1985

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher, Elsevier Science Publishers B.V. (North-Holland Physics Publishing Division), P.O. Box 103, 1000 AC Amsterdam, The Netherlands.

Special regulations for authors. – Upon acceptance of an article by the journal, the author(s) will be asked to transfer copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information.

Submission to this journal of an article entails the author's irrevocable and exclusive authorization of the publisher to collect any sums or considerations for copying or reproduction payable by third parties (as mentioned in article 17 paragraph 2 of the Dutch Copyright Act of 1912 and in the Royal Decree of June 20, 1974 (S. 351) pursuant to article 16b of the Dutch Copyright Act of 1912) and/or to act in or out of Court in connection therewith.

Special regulations for readers in the U.S.A. – This journal has been registered with the Copyright Clearance Center, Inc. Consent is given for copying of articles for personal or internal use, or for the personal use of specific clients. This consent is given on the condition that the copier pays through the Center the per copy fee stated in the code on the first page of each article for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. The appropriate fee should be forwarded with a copy of the first page of the article to the Copyright Clearance Center, Inc., 27 Congress Street, Salem, MA 01970, U.S.A. If no code appears in an article, the author has not given broad consent to copy and permission to copy must be obtained directly from the author. All articles published prior to 1981 may be copied for a per-copy fee of US $2.25, also payable through the Center. (N.B. For review journals this fee is $0.25 per copy per page.) This consent does not extend to other kinds of copying, such as for general distribution, resale, advertising and promotion purposes, or for creating new collective works. Special written permission must be obtained from the publisher for such copying.

Published monthly

Printed in The Netherlands

INDEX OF AUTHORS AND PAPERS

Abdullaev, F.KH., see Abdumalikov, A.A. **123A** (1984) 625

Abdumalikov, A.A. and Abdullaev, F.KH., On the damping of an elementary excitation of the quantum system interacting with a gaussian random field **123A** (1984) 625

Abraham, D.B., Exact results for surface structures and phase transitions **124A** (1984) 1

Abu-Sitta, A.M.M., see Obada, A.-S.F. **130A** (1985) 292

Albeverio, S. and Høegh-Krohn, R., Schrödinger operators with point interactions and short range expansions **124A** (1984) 11

Aldea, A., see Turcu, I. **126A** (1984) 520

Alder, B.J. and Alley, W.E., Decay of correlations in the Lorentz gas **121A** (1983) 523

Alley, W.E., see Alder, B.J. **121A** (1983) 523

Alvarez-Gaumé, L., Supersymmetry and the Atiyah–Singer index theorem **124A** (1984) 29

An, I., Chen, S. and Guo, H., Search for the symmetry of the Fokker–Planck equation. **128A** (1984) 520

Angelié, A. and Pélissier, J.L., Sodium melting curve calculation. I. Variational approach limitations **121A** (1983) 207

Araki, H., On C*-algebra methods for the XY and Ising models **124A** (1984) 47

Arauz-Lara, J.L. and Medina-Noyola, M., Sum rules for $S_{\alpha\beta}(k, \omega)$ for two diffusing species **122A** (1983) 547

Arimitsu, T., Ban, M. and Shibata, F., A solvable model of microscopic frequency modulation. I. Conventional treatment of the damping operator **123A** (1984) 131

Arimitsu. T., see Ban, M. **129A** (1985) 455

Arteca, G.A., see Fernández, F.M. **122A** (1983) 37

Arteca, G.A., Fernández, F.M., Mesón, A.M. and Castro, E.A., A method for summing strongly divergent perturbation series: the Zeeman effect in hydrogen **128A** (1984) 253

Arteca, G.A., Fernández, F.M. and Castro, E.A., A method for summation of perturbation series **128A** (1984) 589

Ashtekar, A., On the Hamiltonian of general relativity **124A** (1984) 51

Baas, F., see Van Houten, H. **130A** (1985) 490

Badziag, P., Gauge independent Wigner function approach to spontaneous emission and to quantum kinetic equations **130A** (1985) 565

Baibuz, V.F., Zitserman, V.Yu. and Drozdov, A.N., Diffusion in a potential field: path-integral approach **127A** (1984) 173

Baker, Jr., G.A., Bessis, D. and Moussa, P., A family of almost periodic Schrödinger operators **124A** (1984) 61

Balaban, T., Recent results in constructing gauge fields **124A** (1984) 79

Balazs, N.L., and Jennings, B.K., Unitary transformations, Weyl's association and the role of canonical transformations **121A** (1983) 576

Ballone, P., Pastore, G. and Tosi, M.P., Theory of the interface between a classical plasma and a hard wall **128A** (1984) 631

Balucani, U., see Posch, H.A. **123A** (1984) 516

Ban, M., see Arimitsu, T. **123A** (1984) 131

Ban, M. and Arimitsu, T., A solvable model of microscopic frequency modulation. II. Rigorous treatment of the damping operator **129A** (1985) 455

Banach, Z., On the balance laws of extended thermodynamics (ET) for non-ideal gases **129A** (1984) 95
Barber, M.N., Phenomenological renormalization of multi-parameter systems **130A** (1985) 171
Barcons, X., Self-oscillations in classical dilute relativistic plasmas **123A** (1984) 617
Bariev, R.Z. and Kozhinov, Yu.V., Truncated Hubbard model **127A** (1984) 316
Battezzati, M., The dipole–dipole dispersion forces between spherical atoms from the Callen–Welton linear response theory **125A** (1984) 591
Bäuerle, G.G.A. and Haneveld, Chr. J., Spin and torsion in the very early universe **121A** (1983) 541
Bäuerle, G.G.A. and Twelker, H.F., On the non-relativistic limit of a spin-$\frac{1}{2}$ particle in a classical gravitational field **130A** (1985) 553
Beckers, J. and Sinzinkayo, S., Invariance under conformal coordinate and point transformations **126A** (1984) 371
Bedeaux, D., The effective shear viscosity for two-phase flow **121A** (1983) 345
Bedeaux, D., Weeks, J.D. and Zielinska, B.J.A., Structure of the liquid–vapor interface using a Gaussian model with a variable interaction range **130A** (1985) 88
Beenakker, C.W.J., Van Saarloos, W. and Mazur, P., Many-sphere hydrodynamic interactions. III. The influence of a plane wall **127A** (1984) 451
Beenakker, C.W.J., The effective viscosity of a concentrated suspension of spheres (and its relation to diffusion) **128A** (1984) 48
Beenakker, C.W.J. and Mazur, P., Diffusion of spheres in a concentrated suspension II **126A** (1984) 349
Beenakker, J.J.M., see Mazur, E. **121A** (1983) 430
Beenakker, J.J.M., see Mazur, E. **121A** (1983) 457
Beenakker, J.J.M., see Hermans, P.W. **122A** (1983) 173
Beenakker, J.J.M., see Mazur, E. **123A** (1984) 412
Beenakker, J.J.M., see Ten Bosch, B.I.M. **123A** (1984) 443
Beenakker, J.J.M., see Breunese, J.N. **123A** (1984) 586
Beenakker, J.J.M., see Breunese, J.N. **126A** (1984) 66
Beenakker, J.J.M., see Breunese, J.N. **126A** (1984) 82
Beenakker, J.J.M., see Turfa, A.F. **129A** (1985) 439
Beenakker, J.J.M., see Van Houten, H. **130A** (1985) 465
Beenakker, J.J.M., see Van Houten, H. **130A** (1985) 483
Beenakker, J.J.M., see Van Houten, H. **130A** (1985) 490
Beenakker, J.J.M., see Mazur, E. **130A** (1985) 505
Bell, J.M. and Oitmaa, J., Ordening in binary fcc alloys **129A** (1984) 17
Bender, C.M., Finite element approximation in quantum theory **124A** (1984) 91
Berezin, V.T., Transformation properties in nonequilibrium-relativistic thermomechanics as compared with those in a field theory **127A** (1984) 282
Bernu, B., Generalized transport coefficients of an *N*-component fluid application to the hydrogen plasma **122A** (1983) 129
Bertotti, G. and Rasetti, M., Random walk on the homogeneous spaces of a group and generalized coherent states **129A** (1985) 125
Bessis, D., see Baker, Jr., G.A. **124A** (1984) 61
Bhagwat, K.W., see Khandekar, D.C. **130A** (1985) 323
Bialynicki-Birula, I., Hubbard, J.C. and Turski, L.A., Gauge-independent canonical formulation of relativistic plasma theory **128A** (1984) 509
Biswas, S.N., Trappeniers, N.J. and Hoogland, J.H.B., *PVT* properties of sulfur-hexafluoride in the gas–liquid critical region **126A** (1984) 384
Bławzdziewicz, J. and Cichocki, B., Linear kinetic theory of hard-sphere fluids **127A** (1984) 38
Blöte, H.W.J. and Nightingale, M.P., The temperature exponent of the *n*-component cubic model **129A** (1985) 1

Bodegom, E. and Meijer, P.H.E., Long term behavior of phase separation; computations with the non-homogeneous, time dependent cluster variation method. **122A** (1983) 13
Boersma, J., see Wiegel, F.W. **122A** (1983) 325
Boersma, J. and Wiegel, F.W., Asymptotic expansions for a remarkable class of random walks **122A** (1983) 334
Bogacz, S.A., The linear response functions for ^{3}He(B) and superconductors in the quasistatic London regime **127A** (1984) 323
Bogolubov Jr., N.N., Le Kien, F. and Shumovsky, A.S., On the kinetics of Dicke-type systems. **128A** (1984) 82
Bogolubov Jr., N.N., Fam Le Kien and Shumovsky, A.S., Dynamics of two-photon processes in a two-level system. **130A** (1985) 273
Bohm, A., Decaying states and the rigged Hilbert space formulation of quantum mechanics **124A** (1984) 103
Boiteux, M. and Kerins, J., Thermodynamic properties of inhomogeneous fluids. **121A** (1983) 399
Boldrighini, C., Hydrodynamics for one-dimensional identical elastic hard rods. **124A** (1984) 115
Boon, W., see Magnus, W. **126A** (1984) 177
Boots, H.M.J., see Trappeniers, N.J. **126A** (1984) 116
Borchers, H.J., Algebras of unbounded operators in quantum field theory **124A** (1984) 127
Borgis, D. and Moreau, M., On the stochastic theory of a bistable chemical reaction . . **123A** (1984) 109
Bountis, T.C., Ramani, A., Grammaticos, B. and Dorizzi, B., On the complete and partial integrability of non-Hamiltonian systems **128A** (1984) 268
Brankov, J.G. and Pesheva, N.Ch., On the metal–insulator phase transition in two exactly solvable models **122A** (1983) 231
Brankov, J.G. and Tonchev, N.S., On the mean-field theory of metal–insulator phase transition in doped systems: critical and tricritical asymptotic behaviour **122A** (1983) 252
Brankov, J.G. and Pesheva, N.Ch., On the mean-field theory of the metal–insulator phase transition **129A** (1985) 423
Braun, E., Irreversible behavior of a quantum harmonic oscillator coupled to a heat bath **129A** (1985) 262
Breunese, J.N., Hermans, L.J.F. and Beenakker, J.J.M., An upper limit to the influence of chiral discrimination on some transport properties of gaseous stereoisomers **123A** (1984) 586
Breunese, J.N., Hermans, L.J.F. and Beenakker, J.J.M., Experimental investigation of the viscomagnetic diffusion flux. **126A** (1984) 66
Breunese, J.N., Gödecke, F.W., Hermans, L.J.F. and Beenakker, J.J.M., The transverse viscomagnetic effect in N_2 and N_2–noble gas mixtures in the near hydrodynamic regime **126A** (1984) 82
Breunese, J.N. and Van Houten, H., The theory of viscous diffusion in the presence of a magnetic field **126A** (1984) 46
Brey, J.J., Casado, J.M. and Morillo, M., On the derivation of an *N*-particle analogue of the Fokker–Planck equation **121A** (1983) 122
Brey, J.J., Casado, J.M. and Morillo, M., Renormalized equations for a weakly nonlinear Duffing oscillator **123A** (1984) 481
Brey, J.J., Casado, J.M. and Morillo, M., On the dynamics of a stochastic nonlinear mean-field model **128A** (1984) 497
Brihaye, Y., see Rossi, P. **126A** (1984) 237
Bros, J., *r*-particle irreducible kernels, asymptotic completeness and analyticity properties of several particle collision amplitudes. **124A** (1984) 145
Brydges, D., The use of random walk in field theory **124A** (1984) 165
Busiello, G., De Cesare, L. and Rabuffo, I., Random field effects in a Bose system: critical behaviour and crossover phenomena in the Hartree limit **126A** (1984) 195

Buzano, C. and Rasetti, M., Quantum Ising-like spin-j model with multipole–multipole interactions: second order mean-field approach **129A** (1984) 165

Caflisch, R., Fluid dynamics and the Boltzmann equation **124A** (1984) 171
Caldeira, A.O., and Leggett, A.J., Path integral approach to quantum Brownian motion **121A** (1983) 587
Caldeira, A.O. and Leggett, A.J., Erratum **130A** (1985) 374
Calkoen, Ch.J., see De Groot, S.R. **127A** (1984) 627
Campana, L.S., Caramico D'Auria, A., D'Ambrosio, M., De Cesare, L. and Esposito, U., Spectral density approach for the damping of fermion elementary excitations in an anisotropic spin-$\frac{1}{2}$ linear chain **123A** (1984) 279
Capel, H.W., see Perk, J.H.H. **123A** (1984) 1
Capel, H.W., see Quispel, G.R.W. **123A** (1984) 319
Capel, H.W., see Quispel, G.R.W. **125A** (1984) 344
Capel, H.W., see Nijhoff, F.W. **130A** (1985) 375
Caramico D'Auria, A., see Campana, L.S. **123A** (1984) 279
Carmona, R., One-dimensional Schrödinger operators with random potentials **124A** (1984) 181
Casado, J.M., see Brey, J.J. **121A** (1983) 122
Casado, J.M., see Brey, J.J. **123A** (1984) 481
Casado, J.M., see Brey, J.J. **128A** (1984) 497
Casas-Vázquez, J., see Llebot, J.E. **121A** (1983) 552
Caspers, W.J. and Magnus, W., Competitive forms of symmetry breaking in linear antiferromagnetic systems **130A** (1985) 155
Castro, E.A., see Fernández, F.M. **122A** (1983) 37
Castro, E.A., see Arteca, G.A. **128A** (1984) 253
Castro, E.A., see Arteca, G.A. **128A** (1984) 589
Cercignani, C., Geppert, L. and Lampis, M., Computation of the polarization creep tensor **121A** (1983) 531
Chakraborty, K.G. and Morita, T., A spine-one Ising model on the Bethe lattice **129A** (1985) 415
Challifour, J.L., Essential self-adjointness of the Yang–Mills Hamiltonian in a Krein space **124A** (1984) 189
Chan, D.Y.C. and White, L.R., On the existence of hydrodynamic fluctuation forces .. **122A** (1983) 505
Chao, K.A., see Sannemo, U. **123A** (1984) 605
Chatterjee, R., see Tuszyński, J.A. **127A** (1984) 228
Chen, S., see An, I. **128A** (1984) 520
Cheung, T.H., Quantum beats in the two-photon resonance fluorescence of a three-level atom **121A** (1983) 309
Ciancio, V., Turrisi, E. and Kluitenberg, G.A., On the propagation of linear longitudinal acoustic waves in isotropic media with shear and volume viscosity and a tensorial internal variable. I. General formalism **125A** (1984) 640
Cichocki, B., see Bławzdziewicz, J. **127A** (1984) 38
Cohen, J.S., see Suttorp, L.G. **123A** (1984) 560
Cohen, J.S. and Suttorp, L.G., Self-diffusion for a weakly-coupled plasma in a magnetic field **123A** (1984) 549
Cohen, J.S. and Suttorp, L.G., The effect of dynamical screening on self-diffusion in a dense magnetized plasma **126A** (1984) 308
Collet, J.H., Use of temperature-Green functions for calculation of second-order susceptibilities **121A** (1983) 85
Colpa, J.H.P., On the classification of the homogeneous 16-vertex models on a square lattice. I. Connection with the boson Bogoliubov transformation **125A** (1984) 425

Colpa, J.H.P., On the classification of the homogeneous 16-vertex models on a square lattice. II. Connection with a new type of phase transition **125A** (1984) 442
Combe, Ph., Guerra, F., Rodriguez, R., Sirigue, M. and Sirigue-Collin, M., Quantum dynamical time evolutions as stochastic flows on phase space **124A** (1984) 561
Combes, J.M., Duclos, P. and Seiler, R., A perturbative method for tunneling **124A** (1984) 211
Conley, C. and Zehnder, E., Subharmonic solutions and Morse theory **124A** (1984) 649
Connor, J.N.L., see Turfa, A.F. **129A** (1985) 439
Cortés, E., see Lindenberg, K. **126A** (1984) 489
Cortés, E. and Lindenberg, K., Finite correlation time effects in nonequilibrium phase transitions. II. Some exact moment results. **123A** (1984) 99
Costa, U.M.S. and Tsallis, C., Square-lattice random Potts model: criticality and pitchfork bifurcation **128A** (1984) 207
Courbage, M., Intrinsic irreversibility of Kolmogorov dynamical systems **122A** (1983) 459
Couzens, R., see Stephenson, J. **129A** (1984) 201

D'Ambrosio, M., see Campana, L.S. **123A** (1984) 279
Davies, B.L. and Dirl, R., Comments on the paper: "Active representations of space groups based on the simple cubic lattice" by H. Kunert and M. Suffczyński **127A** (1984) 677
De Alcantara Bonfim, O.F., Mean field renormalization group analysis of the Blume–Capel model **130A** (1985) 367
De'Bell, K., Geldart, D.J.W. and Glasser, M.L., Recursion relations for the q-state Potts model on a closed Cayley tree **125A** (1984) 625
De Cesare, L., see Campana, L.S. **123A** (1984) 279
De Cesare, L., see Busiello, G. **126A** (1984) 195
De Groot, S.R. and Calkoen, Ch.J., The volume viscosity of a degenerate massive neutrino system. **127A** (1984) 627
De Haan, M., On a class of model dynamical systems **122A** (1983) 345
Dekker, H., Exact classical and quantum mechanics of a particle coupled to a membrane **129A** (1985) 503
De la Llave, R., Size and shape of stability domains in complex analytic dynamics **124A** (1984) 193
De Lange, C. and Janssen, T., Modulated Kronig–Penney model in superspace **127A** (1984) 125
De la Peña-Auerbach, L., see Rodríguez, R.F. **123A** (1984) 609
D'Elía, S., Nonuniversality in a model Hamiltonian with four-spin interactions **130A** (1985) 220
Den Breems, A., see Nijhoff, F.W. **130A** (1985) 375
Den Nijs, M., Quantized Hall conductance in a two-dimensional periodic potential ... **124A** (1984) 199
De Palma, A., see Malek Mansour, M. **128A** (1984) 377
Dhont, J.K.G., Multiple Rayleigh–Gans–Debye scattering in colloidal systems – dynamic light scattering **129A** (1985) 374
Díaz, M.A., see Veguillas, J. **123A** (1984) 463
Díaz Armentia, M., Veguillas, J. and Palomares, F., On generalized Waldmann–Snider equations. II. $\hat{\Pi}$-subdynamics **128A** (1984) 447
Di Liberto, F., see Peruggi, F. **123A** (1984) 175
Dirl, R., see Davies, B.L. **127A** (1984) 677
Dixon, J.M., see Tuszyński, J.A. **127A** (1984) 228
Dodonov, V.V. and Manko, O.V., Quantum damped oscillator in a magnetic field **130A** (1985) 353
Dorizzi, B., see Bountis, T.C. **128A** (1984) 268
Drozdov, A.N., see Baibuz, V.F. **127A** (1984) 173
Ducastelle, F., see Sanchez, J.M. **128A** (1984) 334
Duclos, P., see Combes, J.M. **124A** (1984) 211
Dudek, M. and Pękalski, A., Magnetic lattice gas of molecules with internal structure . **126A** (1984) 504

Duff, M.J., Nilsson, B.E.W. and Pope, C.N., Superunification from eleven dimensions. **124A** (1984) 219
Dumont, M., Longitudinal relaxation spectra of the transverse Ising model close to T_c. **125A** (1984) 124
Dunlop, P.J., see Trengove, R.D. **128A** (1984) 486
Dürr, D., Stochastic acceleration in two dimensions **124A** (1984) 249

Easteal, A.J., Woolf, L.A. and Jolly, D.L., Self-diffusion in a dense hard-sphere fluid: a molecular dynamics simulation. **121A** (1983) 286
Easteal, A.J., Woolf, L.A. and Jolly, D.L., On the number dependence of hard-spheres diffusion coefficients from molecular dynamics simulations **127A** (1984) 344
Ebeling, W., Statistical thermodynamics of fluid hydrogen at high energy density **130A** (1985) 587
Eckhardt, W., Kirchhoff–Planck law for freely radiating bodies and fluctuation–dissipation theorem **128A** (1984) 467
Eckmann, J.-P., Renormalization group analysis of functional composition: A review . **124A** (1984) 259
Englisch, H., and Englisch, R., Hogenberg–Kohn theorem and non-V-representable densities **121A** (1983) 253
Englisch, R., see Englisch, H. **121A** (1983) 253
Enss, V., Topics in scattering theory for multiparticle quantum mechanics: a progress report **124A** (1984) 269
Erhel, J., Lichnewsky, A. and Thomasset, F., Some algorithms for vector or parallel computers **124A** (1984) 587
Esposito, U., see Campana, L.S. **123A** (1984) 279
Evans, J.W., Irreversible random and cooperative processes on lattices: direct determination of density expansions **123A** (1984) 297

Fain, B., Radiationless transitions: when can a molecule serve as its own thermal bath? **122A** (1983) 363
Fain, B. and Lin, S.H., Non-equilibrium phonons in nonradiative rate processes **128A** (1984) 164
Fam Le Kien,, see Bogolubov Jr., N.N. **130A** (1985) 273
Faramawy, F.K., see Obada, A.-S.F. **130A** (1985) 292
Farrar, G.R., If nature were supersymmetric, how could we tell? **124A** (1984) 293
Fedchenia, I.I., Construction of stationary distribution functions for a system of stochastic Langevin-type equations **123A** (1984) 535
Fedchenia, I.I., Boundary stochastic problems, multistability in the presence of fluctuations and noise-induced phase transitions **125A** (1984) 577
Felderhof, B.U., and Jones, R.B., Cluster expansion of the diffusion kernel of a suspension of interacting Brownian particles **121A** (1983) 329
Felderhof, B.U., Reciprocity in electrohydrodynamics **122A** (1983) 383
Felderhof, B.U., Bounds for the complex dielectric constant of a two-phase composite. **126A** (1984) 430
Felderhof, B.U., see Mattern, K **129A** (1985) 550
Felderhof, B.U., see Mattern, K. **129A** (1985) 562
Felderhof, B.U., Wigner solids and diffusion controlled reactions in a regular array of spheres **130A** (1985) 34
Felderhof, B.U. and Jones, R.B., Diffusion in hard sphere suspensions **122A** (1983) 89
Felderhof, B.U. and Mattern, K., Optical potential of a disordered array of scatterers . **128A** (1984) 404
Fernández, F.M., Arteca, G.A. and Castro, E.A., Analytical expressions for the eigenvalues of anharmonic oscillators **122A** (1983) 37
Fernández, F.M., see Arteca, G.A. **128A** (1984) 253
Fernández, F.M., see Arteca, G.A. **128A** (1984) 589
Ferrari, L., On the velocity relaxation of a Rayleigh gas. II. An investigation on reliability and accuracy of the usual kinetic equation **127A** (1984) 194
Fisher, M.E., see Huse, D.A. **121A** (1983) 363

Fisher, M.E., see Yeomans, J.M. ... **127A** (1984) 1
Fittipaldi, I.P., see Sá Barreto, F.C. ... **129A** (1985) 360
Frankowicz, M., Malek Mansour, M. and Nicolis, G., Stochastic analysis of explosive behaviour: a qualitative approach ... **125A** (1984) 237
Freedman, D.Z., Vacuum stability in supergravity ... **124A** (1984) 301
Froese, R., Bound states in N-body quantum systems ... **124A** (1984) 311
Fröhlich, J. and Spencer, T., Mathematical theory of Anderson localisation ... **124A** (1984) 303
Fukuda, W., see Katsura, S. ... **130A** (1985) 597
Furukawa, H., Dynamic-scaling theory for phase-separating unmixing mixtures: growth rates of droplets and scaling properties of aurocorrelation frunctions ... **123A** (1984) 497
Futcher, E.J. and Hoare, M.R., The p–q model Boltzmann equation ... **122A** (1983) 516

Gadella, M., Construction of rigged Hilbert spaces to describe resonances and virtual states ... **124A** (1984) 317
Garanin, D.A. and Lutovinov, V.S., Spin waves in the easy-plane ferromagnets ... **126A** (1984) 416
García-Colín, L.S., see López de Haro, M. ... **128A** (1984) 535
García-Colín, L.S., see Garibay-Jiménez, R. ... **130A** (1985) 616
Garibay-Jiménez, R. and García-Colin, L.S., The role of thermodynamic representations in the study of fluids in far from equilibrium steady states ... **130A** (1985) 616
Gawedzki, K. and Kupiainen, A., Rigorous renormalization group – asymptotic freedom and non-Gaussian fixed points ... **124A** (1984) 455
Geldart, D.J.W., see De'Bell, K. ... **125A** (1984) 625
George, C., see Škarka, V. ... **127A** (1984) 473
Geppert, L., see Cercignani, C. ... **121A** (1983) 531
Geroch, R., General relativity ... **124A** (1984) 325
Geurst, J.A., Virtual mass in two-phase bubbly flow ... **129A** (1985) 233
Ginibre, J., Classical non-linear evolution equations, Cauchy problem and scattering ... **124A** (1984) 327
Glasser, M.L., see De'Bell, K. ... **125A** (1984) 625
Gödecke, F.W., see Breunese, J.N. ... **126A** (1984) 82
Goldstein, P.P. and Turski, L.A., On relativistic corrections in a Vlasov plasma ... **127A** (1984) 549
Gonçalves, L.L. and Horiguchi, T., Two-dimensional decorated Ising model with classical vector spins and Ising spins of magnitude s ... **127A** (1984) 587
Gordov, E.P., Koganov, G.A. and Khazanov, A.M., Semiclassical representation method in statistical physics of interacting molecules. II. Theory of open systems. Application to the theory of a single-mode laser taking into account the recoil effect. **125A** (1984) 519
Grammaticos, B., see Bountis, T.C. ... **128A** (1984) 268
Gratias, D., see Sanchez, J.M. ... **128A** (1984) 334
Griffa, A., Canonical transformations and variational principles for fluid dynamics ... **127A** (1984) 265
Grigolini, P., see Marchesoni, F. ... **121A** (1983) 269
Grisaru, M.T., Divergences in supergravity ... **124A** (1984) 347
Grozdev, K.I., Effect of impurities on the phase transition temperature in a two-dimensional Ising lattice ... **127A** (1984) 354
Grüneis, F., A number fluctuation model generating $1/f$ pattern ... **123A** (1984) 149
Gudmundsson, V., see Toyoda, T. ... **127A** (1984) 529
Guengant, L., see Vidal, D. ... **127A** (1984) 574
Guerra, F., see Combe, Ph. ... **124A** (1984) 561
Guo, H., see An, I. ... **128A** (1984) 520

Haag, R., Local relativistic quantum physics ... **124A** (1984) 357
Hamber, H.W., Hadrons and quarks in lattice QCD ... **124A** (1984) 365

Haneveld, Chr. J., see Bäuerle, G.G.A. ... **121A** (1983) 541
Hara, H., see Morita, T. ... **125A** (1984) 607
Hara, H., see Morita, T. ... **127A** (1984) 113
Hermans, L.J.F., see Mazur, E. ... **121A** (1983) 457
Hermans, L.J.F., see Hermans, P.W. ... **122A** (1983) 173
Hermans, L.J.F., see Mazur, E. ... **123A** (1984) 412
Hermans, L.J.F., see Breunese, J.N. ... **123A** (1984) 586
Hermans, L.J.F., see Breunese, J.N. ... **126A** (1984) 66
Hermans, L.J.F., see Breunese, J.N. ... **126A** (1984) 82
Hermans, P.W., Hermans, L.J.F. and Beenakker, J.J.M., A survey of experimental data related to the non-spherical interaction for the hydrogen isotopes and their mixture with noble gases ... **122A** (1983) 173
Hernando, J., see Massidda, V. ... **128A** (1984) 318
Hess, S., see Pardowitz, I. ... **121A** (1983) 107
Hess, S., Decay of bcc-structure and of bond-orientational order in a fluid ... **127A** (1984) 509
Hida, T., White noise analysis and its applications to quantum dynamics ... **124A** (1984) 399
Hijmans, J., see Schram, H.M. ... **125A** (1984) 58
Hijmans, J., Simplified bifurcation analysis of the sixteen vertex model, based on the standard representation of equivalence classes of models ... **130A** (1985) 57
Hijmans, J. and Schram, H.M., On the bifurcations occurring in the parameter space of the sixteen vertex model. I. Discrete bifurcations ... **121A** (1983) 479
Hijmans, J. and Schram, H.M., On the bifurcations occurring in the parameter space of the sixteen vertex model. II. Bifurcations arising from degeneracies in the **N**-matrix ... **125A** (1984) 25
Hijnen, H.J.M., see Mazur, E. ... **123A** (1984) 412
Hoare, M.R., see Futcher, E.J. ... **122A** (1983) 516
Høegh-Krohn, R., see Albeverio, S. ... **124A** (1984) 11
Höhne, F.E., Redmer, R., Röpke, G. and Wegener, H., Linear response theory for thermoelectric transport coefficients of a partially ionized plasma ... **128A** (1984) 643
Holden, H., see Martinelli, F. ... **124A** (1984) 413
Hoogeveen, W. and Tjon, J.A., Long-time tails in a quantum Lorentz gas ... **125A** (1984) 163
Hooiveld, A.J.W., see Van Weert, Ch.G. ... **127A** (1984) 388
Horiguchi, T., see Gonçalves, L.L. ... **127A** (1984) 587
Horiguchi, T., Ising model with two-spin interactions and four-spin interactions on the square lattice ... **130A** (1985) 194
Horiguchi, T. and Morita, T., Devil's staircase in a one-dimensional mapping ... **126A** (1984) 328
Horiguchi, T. and Morita, T., Fractal dimension related to devil's staircase for a family of piecewise linear mappings ... **128A** (1984) 289
Hubbard, J.B., see Huckaby, D.A. ... **122A** (1983) 602
Hubbard, J.C., see Bialynicki-Birula, I. ... **128A** (1984) 509
Huckaby, D.A., and Hubbard, J.B., A random walk on a random channel with absorbing barriers ... **122A** (1983) 602
Huijser, R.H., see Trappeniers, N.J. ... **126A** (1984) 116
Huse, D.A., Szpilka, A.M. and Fisher, M.E., Melting and wetting transitions in the three-state chiral clock model ... **121A** (1983) 363
Hynes, J.T., see Van der Zwan, G. ... **121A** (1983) 227

Ichinose, T., Path integral formulation of the propagator for a two-dimensional Dirac particle ... **124A** (1984) 419
Ichiyanagi, M. and Ohya, M., Microscopic approach for dynamics of condensate near

the transition temperature **121A** (1983) 315
Imaishi, N., Kestin, J. and Wakeham, W.A., Thermal conductivity of two binary mixtures of gases of equal molecular weight..... **123A** (1984) 50
Imaishi, N. and Kestin, J., Thermal conductivity of three noble gases with carbon monoxide **126A** (1984) 98
Imaishi, N. and Kestin, J., Thermal conductivity of methane with carbon monoxide... **126A** (1984) 301
Ishikawa, T., see Kikuchi, R..... **123A** (1984) 227

Jablonski, A., Statistical model of an atom in electron scattering calculations..... **129A** (1985) 591
Jacobs, L. and Nauenberg, M., Scaling analysis of the $d=3$ random field Ising model.. **128A** (1984) 529
Janner, A., see Van Beest, B.W..... **122A** (1983) 263
Janner, A., see Janssen, T..... **126A** (1984) 163
Janssen, T., see De Lange, C..... **127A** (1984) 125
Janssen, T. and Janner, A., Superspace groups and representations of ordinary space groups: alternative approaches to the symmetry of incommensurate crystal phases .. **126A** (1984) 163
Jennings, B.K., see Balazs, N.L..... **121A** (1983) 576
Jolly, D.L., see Easteal, A.J..... **121A** (1983) 286
Jolly, D.L., see Easteal, A.J..... **127A** (1984) 344
Jones, R.B., see Felderhof, B.U. **121A** (1983) 329
Jones, R.B., see Felderhof, B.U. **122A** (1983) 89
Jones, R.B., and Schmitz, R., Isotropic elastic medium containing a spherical particle. I. Incompressible media **122A** (1983) 105
Jones, R.B., and Schmitz, R., Isotropic elastic medium containing a spherical particle. II. Compressible media **122A** (1983) 114
Jones, R.B. and Schmitz, R., Effective elasticity of a solid suspension of spheres. I. Stress–strain constitutive relation **125A** (1984) 381
Jones, R.B. and Schmitz, R., Effective elasticity of a solid suspension of spheres. II. Effective moduli in lowest multipole approximation **126A** (1984) 1
Jou, D., see Llebot, J.E..... **121A** (1983) 552

Kalos, M.H., Monte Carlo methods for the many-fermion problem **124A** (1984) 427
Kandrup, H.E., A covariant kinetic equation for a self-gravitating system..... **126A** (1984) 461
Karmann, K.-P., see Sauermann, G..... **122A** (1983) 375
Karmann, K.-P., Markovian-type approximation for second-order response **125A** (1984) 619
Kashlev, YU.A., Theory of incoherent hydrogen diffusion in metals..... **129A** (1984) 184
Katsura, S. and Matsuno, A., The transition from the spin-glass to the ferromagnetic state in the bond-random Ising model in the face-centred cubic lattice **122A** (1983) 483
Katsura, S. and Kikuchi, R., The cluster variation method and the method of the reducibility of density matrices **123A** (1984) 595
Katsura, S. and Kikuchi, R., Erratum **127A** (1984) 692
Katsura, S. and Fukuda, W., Exactly solvable models showing chaotic behavior **130A** (1985) 597
Kawasaki, K., see Tokuyama, M..... **123A** (1984) 386
Kawasaki, K., see Ohta, S..... **128A** (1984) 1
Kawasaki, K. and Nagai, T., Statistical dynamics of interacting kinks I..... **121A** (1983) 175
Kenkre, V.M., Parris, P.E. and Phatak, S.M., Motion and capture of quasiparticles in solids in the presence of cooperative trap interactions **128A** (1984) 571
Kerins, J., see Boiteux, M. **121A** (1983) 399
Keskin, M. and Meijer, P.H.E., A model for quenching via hidden variables; non-equilibrium behaviour of a system with two long range order parameters **122A** (1983) 1
Kesten, H., Percolation theory and resistance of random electrical networks..... **124A** (1984) 429

Kestin, J., see Imaishi, N. **123A** (1984) 50
Kestin, J., see Imaishi, N. **126A** (1984) 98
Kestin, J., see Imaishi, N. **126A** (1984) 301
Khalatnikov, I.M., Lebedev, V.V. and Sukhorukov, A.I., Fluctuation effects in two-dimensional hydrodynamic systems **126A** (1984) 135
Khandekar, D.C., Bhagwat, K.V. and Lawande, S.V., Exact analysis of the fluorescent Dicke model in the thermodynamic limit **130A** (1985) 323
Khazanov, A.M., see Gordov, E.P. **125A** (1984) 519
Kikuchi, R., Ishikawa, T. and Sato, H., Statistical mechanics of thermal diffusion **123A** (1984) 227
Kikuchi, R., see Katsura, S. **123A** (1984) 595
Kikuchi, R., see Katsura, S. **127A** (1984) 692
Kilimann, M.K., see Kremp, D. **127A** (1984) 646
Kim, D., Self-dual transfer matrix renormalization for the triangular Potts model **123A** (1984) 577
Kitamura, T., A quantum field theory of lattice dynamics at finite temperature **128A** (1984) 427
Kitamura, T. and Umezawa, H., A quantum field theory of crystals near melting temperature **121A** (1983) 38
Kluitenberg, G.A., see Ciancio, V. **125A** (1984) 640
Kneller, G.R. and Titulaer, U.M., The covariant form of the Klein–Kramers equation and the associated moment equations **129A** (1984) 81
Kneller, G.R. and Titulaer, U.M., Boundary layer on the rate of diffusion-controlled reactions **129A** (1985) 514
Knight, B.W., How Hamiltonian dynamical theory in the complex domain yields asymptotic solutions to the non-Hermitian integral equations of visual nerve-networks **124A** (1984) 431
Knops, H.J.F., see Rijpkema, J.J.M. **122A** (1983) 489
Koganov, G.A., see Gordov, E.P. **125A** (1984) 519
Köhler, W.E., see Schaefer, J. **129A** (1985) 469
Kondepudi, D.K. and Nelson, G.W., Chiral-symmetry-breaking states and their sensitivity in nonequilibrium chemical systems **125A** (1984) 465
Korutchevam, E.R., see Uzunov, D.I. **129A** (1985) 535
Korving, J., see Van Houten, H. **130A** (1985) 483
Kotulski, Z. and Sobczyk, K., Characteristic functionals of randomly excited physical systems **123A** (1984) 261
Kowalewski, L., see Micnas, R. **127A** (1984) 422
Kozhinov, Yu.V., see Bariev, R.Z. **127A** (1984) 316
Kraeft, W.D., see Kremp, D. **127A** (1984) 72
Kraeft, W.D., see Kremp, D. **127A** (1984) 646
Kremp, D., Kraeft, W.D. and Lambert, A.J.D., Equation of state and ionization equilibrium for nonideal plasmas **127A** (1984) 72
Kremp, D., Kilimann, M.K., Kraeft, W.D., Stolz, H. and Zimmermann, R., Ladder approximation of the equation of state for degenerate Fermi systems **127A** (1984) 646
Kupiainen, A., see Gawedzki, K. **124A** (1984) 455
Kuščer, I., see Mazur, E. **121A** (1983) 430
Kuščer, I., see Ten Bosch, B.I.M. **123A** (1984) 443

Lagan, S. and McLennan, J.A., Kinetic theory for a weakly-associated diatomic gas with reactions **128A** (1984) 178
Lambert, A.J.D., see Kremp, D., ... **127A** (1984) 72
Lampis, M., see Cercignani, C. **121A** (1983) 531
Lanford III, O.E., Computer-assisted proofs in analysis **124A** (1984) 465

Lassner, G., Algebras of unbounded operators and quantum dynamics **124A** (1984) 471
Lawande, S.V., see Khandekar, D.C. **130A** (1985) 323
Lebedev, V.V., see Khalatnikov, I.M. **126A** (1984) 135
Le Duff, Y. and Sergiescu, V., On a pair-potential-independent criterion for D.I.D. light scattering **127A** (1984) 347
Leermakers, M.C.J., see Van Weert, Ch.G. **127A** (1984) 388
Leggett, A.J., see Caldeira, A.O. **121A** (1983) 587
Leggett, A.J., see Caldeira, A.O. **130A** (1985) 374
Le Kien, F., see Bogolubov Jr., N.N. **128A** (1984) 82
Lekner, J., Invariant formulation of the reflection of long waves by interfaces **128A** (1984) 229
Lessner, G., The electric conductivity of stationary and homogeneous electrolytes up to concentrations $c \approx 1$ mol/l and high electric fields **122A** (1983) 441
Lessner, G., Erratum **126A** (1984) 300
Leutheusser, E., Exact solution of the Percus–Yevick equation for a hard-core fluid in odd dimensions **127A** (1984) 667
Levesque, D. and Weis, J.J., On the calculation of dielectric properties from computer simulations **125A** (1984) 270
Lichnewsky, A., see Erhel, J. **124A** (1984) 587
Lin, S.H., see Fain, B. **128A** (1984) 164
Lindenberg, K., see Cortes, E. **123A** (1984) 99
Lindenberg, K. and Cortés, E., Thermal relaxation of systems with quadratic heat bath coupling. I. Classical systems **126A** (1984) 489
Lindenberg, K. and West, B.J., Finite correlation time effects in nonequilibrium phase transitions. III. Multi-degree-of-freedom systems **128A** (1984) 25
Llebot, J.E., Jou, D. and Casas-Vázquez, J., A thermodynamic approach to heat and electric conduction in solids **121A** (1983) 552
López de Haro, M., Rodríguez, R.F. and García-Colín, L.S., Effects of spatial variations in extended irreversible thermodynamics **128A** (1984) 535
Lukierska-Walasek, K., Quantum crossover behaviour of the X–Y model in a transverse magnetic field **127A** (1984) 613
Lutovinov, V.S., see Garanin, D.A. **126A** (1984) 416

Maćkowiak, J., On the exact mean-field description of continuous quantum systems in equilibrium II **121A** (1983) 59
Magnus, W., see Caspers, W.J. **130A** (1985) 155
Magnus, W. and Boon, W., A Green function approach to the alternating spin-$\frac{1}{2}$ Heisenberg antiferromagnetic linear chain in a magnetic field **126A** (1984) 177
Malek Mansour, M., see Frankowicz, M. **125A** (1984) 237
Malek Mansour, M. and De Palma, A., On the stochastic modelling of systems with non-local interactions **128A** (1984) 377
Manko, O.V., see Dodonov, V.V. **130A** (1985) 353
Marchand, J.P. and Martin, Ph.A., A microscopic derivation of the classical nucleation equation **127A** (1984) 681
Marchesoni, F. and Grigolini, P., The Kramers model of chemical relaxation in the presence of a radiation field **121A** (1983) 269
Marée, P.M.J., see Van Houten, H. **130A** (1985) 490
Marro, J. and Toral, R., Equilibrium cluster distributions of the three-dimensional Ising model in the one phase region **122A** (1983) 563
Martin, Ph.A., see Marchand, J.P. **127A** (1984) 681
Martinelli, F. and Holden, H., On absence of diffusion for low energy for a random

Schrödinger operator on $L^2(R^\nu)$ **124A** (1984) 413
Martinez, S. and Tirapegui, E., Entropy functionals associated to shifts dynamical systems **122A** (1983) 593
Mason, E.A. and Mazur, E., Theory of field effects on transport properties of polyatomic gases in the transition regime **130A** (1985) 437
Massidda, V. and Hernando, J., Order–disorder transitions for a two-dimensional lattice of reorientable quadrupoles in the mean-field approximation **128A** (1984) 318
Matsuno, A., see Katsura, S. **122A** (1983) 483
Mattern, K., see Felderhof, B.U. **128A** (1984) 404
Mattern, K. and Felderhof, B.U., Contributions of the self-energy of a wave propagating in a disordered array **129A** (1985) 550
Mattern, K. and Felderhof, B.U., Wave propagation in a disorded array of monopole scatterers **129A** (1985) 562
Mavroyannis, C., Two-atom Hanle-type resonance spectra at high photon densities ... **125A** (1984) 398
Mavroyannis, C., Cooperative and interference effects in the resonance fluorescence of two identical three-level atoms at high photon densities. II. Numerical results **127A** (1984) 407
Mazur, E., Beenakker, J.J.M. and Kuščer, I., Kinetic theory of field effects in non-uniform molecular gases **121A** (1983) 430
Mazur, E., Viswat, E. Hermans, L.J.F. and Beenakker, J.J.M., Experiments on the viscosity of some symmetric top molecules in the presence of magnetic and electric fields **121A** (1983) 457
Mazur, E., Hijnen, H.J.M., Hermans, L.J.F. and Beenakker, J.J.M., Experiments on the influence of a magnetic field on diffusion in N_2–noble gas mixtures **123A** (1984) 412
Mazur, E., see Mason, E.A. **130A** (1985) 437
Mazur, E., van Houten, H. and Beenakker, J.J.M., A comparison of data on the visco-magnetic effect, flow birefringence and depolarized Rayleigh line broadening **130A** (1985) 505
Mazur, P., see Weisenborn, A.J. **123A** (1984) 191
Mazur, P., see Beenakker, C.W.J. **126A** (1984) 349
Mazur, P., see Beenakker, C.W.J. **127A** (1984) 451
Mazur, P. and Weisenborn, A.J., The Oseen drag on a sphere and the method of induced forces **123A** (1984) 209
McBryan, O.A., Fluids, discontinuities and renormalization group methods **124A** (1984) 481
McConnell, J., Theory of nuclear magnetic relaxation by anisotropic chemical shift ... **127A** (1984) 152
McConnell, J., Debye limit of the stochastic rotation operator **128A** (1984) 611
McLennan, J.A., see Lagan, S. **128A** (1984) 178
Medina-Noyola, M., see Arauz-Lara, J.L. **122A** (1983) 547
Meijer, P.H.E., see Keskin, M. **122A** (1983) 1
Meijer, P.H.E., see Bodegom, E. **122A** (1983) 13
Meijer, P.H.E., see Van Royen, E. **127A** (1984) 87
Mellema, J. and Willemse, M.W.M., Effective viscosity of dispersions approached by a statistical continuum method **122A** (1983) 286
Mel'nikov, V.I., Activated tunneling decay of metastable state: solution of the Kramers problem **130A** (1985) 606
Mensonides, F., see Van Weert, Ch.G. **127A** (1984) 388
Mesón, A.M., see Arteca, G.A. **128A** (1984) 253
Michels, A.C., see Trappeniers, N.J. **126A** (1984) 116
Micnas, R. and Kowalewski, L., Localized states and long-range ordering in one-dimensional transverse Ising model **127A** (1984) 422
Millev, Y.T., see Uzunov, D.I. **129A** (1985) 535
Mizrahi, S.S., Quantum mechanics in the Gaussian wave-packet phase space represen-

tation **127A** (1984) 241
Monroy, G., see Peruggi, F. **123A** (1984) 175
Moraal, H., Correlated site-bond percolation for multicomponent spin models **122A** (1983) 313
Moreau, M., see Borgis, D. **123A** (1984) 109
Morillo, M., see Brey, J.J. **121A** (1983) 122
Morillo, M., see Brey, J.J. **123A** (1984) 481
Morillo, M., see Brey, J.J. **128A** (1984) 497
Morita, T., Spin-glass and ferromagnetic phases of the random-bond Ising model on the Bethe lattice **125A** (1984) 321
Morita, T., see Horiguchi, T. **126A** (1984) 328
Morita, T., see Shinomoto, S. **127A** (1984) 141
Morita, T., see Horiguchi, T. **128A** (1984) 289
Morita, T., see Chakraborty, K.G. **129A** (1985) 415
Morita, T. and Hara, H., Solution of the Fokker–Planck equation with spatial coordinate-dependent moments in many dimensions **125A** (1984) 607
Morita, T. and Hara, H., Numerical estimation of the path integral, and the diffusion in an anharmonic oscillator **127A** (1984) 113
Morozov, V.G., On the Langevin formalism for nonlinear and nonequilibrium hydrodynamic fluctuations **126A** (1984) 443
Morriss, G.P. and Perram, J.W., The dielectric constant of dipolar discs **129A** (1985) 395
Moser, J. and Poschel, J., On the stationary Schrödinger equation with a quasi-periodic potential **124A** (1984) 535
Moussa, P., see Baker, Jr., G.A. **124A** (1984) 61
Mrugała, R., On equivalence of two metrics in classical thermodynamics. **125A** (1984) 631
Müller, G., see Taylor, J.H. **130A** (1985) 1
Münster, G., Quantitative non-Monte Carlo methods for low-energy QCD **124A** (1984) 495
Muriel, A., Initial conditions in non-equilibrium statistical mechanics. I. The generation of solitary waves from discontinuities **129A** (1985) 577

Nagai, T., see Kawasaki, K. **121A** (1983) 175
Nauenberg, M., see Jacobs, L. **128A** (1984) 529
Nauenberg, M. and Sander, L., Instabilities in continuum equations for aggregation by diffusion **123A** (1984) 360
Nelson, E., Quantum fluctuations – an introduction **124A** (1984) 521
Nelson, G.W., see Kondepudi, D.K. **125A** (1984) 465
Nicolis, G., see Frankowicz, M. **125A** (1984) 237
Nieuwenhuizen, Th.M., Exact solutions for spectra and Green's functions in random one-dimensional systems **125A** (1984) 197
Nightingale, M.P., see Blöte, H.W.J. **129A** (1984) 1
Nijboer, B.R.A., On the electrostatic potential due to a slab shaped and a semi-infinite NaCl-type lattice **125A** (1984) 275
Nijhoff, F.W., see Perk, J.H.H. **123A** (1984) 1
Nijhoff, F.W., see Quispel, G.R.W. **123A** (1984) 319
Nijhoff, F.W., see Quispel, G.R.W. **125A** (1984) 344
Nijhoff, F.W., Capel, H.W. and Den Breems, A., Separable interactions and liquid ^{3}He. III. Landau expansion in the presence of a Hubbard interaction **130A** (1985) 375
Nilsson, B.E.W., see Duff, M.J. **124A** (1984) 219

Obada, A.-S.F., Abu-Sitta, A.M.M. and Faramawy, F.K., On the generalized linear response functions **130A** (1985) 292

Ohta, S., Ohta, T. and Kawasaki, K., Dynamics of topological defects in critical binary fluids, metamagnets and ^{3}He–^{4}He mixtures **128A** (1984) 1
Ohta, T., see Ohta, S. **128A** (1984) 1
Ohtsuki, T., Isotropic–nematic phase transition in a system of slightly flexible long thin rods **121A** (1983) 513
Ohtsuki, T., Dynamical properties of strongly interacting Brownian particles. III. Binary mixtures **122A** (1983) 212
Ohya, M., see Ichiyanagi, M. **121A** (1983) 315
Oitmaa, J., see Bell, J.M. **129A** (1984) 17
Oleksy, C. and Przystawa, J., On phase transitions with bilinearly coupled order parameters **121A** (1983) 145
Oppenheim, I. and Van Kampen, N.G., The kinetic origin of the stick boundary condition **122A** (1983) 277
Orsag, S.A., Small-scale structure of the Taylor–Green vortex **124A** (1984) 521

Palomares, F., see Veguillas, J. **123A** (1984) 463
Palomares, F., see Díaz Armentia, M. **128A** (1984) 447
Papież, L., The limit diffusion mechanism of relaxation for spin systems **122A** (1983) 413
Pardowitz, I. and Hess, S., Molecular foundation of a unified theory for the isotropic and nematic or cholesteric phases of liquid crystals **121A** (1983) 107
Parisi, G., Spin glasses and replicas **124A** (1984) 523
Parola, A. and Reatto, L., Critical behaviour of the lattice gas model in the Percus–Yevick approximation **125A** (1984) 255
Parris, P.E., see Kenkre, V.M. **128A** (1984) 571
Pastore, G., see Ballone, P. **128A** (1984) 631
Paszkiewicz, T., Exact and approximate generalized diffusion equation for the Lorentz gas **123A** (1984) 161
Pearce, P.A., Many-component limit of the quantum Potts model **125A** (1984) 247
Pękalski, A., see Dudek, M. **126A** (1984) 504
Pękalski, A., Lattice gas model for monolayer of amphipatic molecules **129A** (1984) 225
Pélissier, J.L., see Angelié, A. **121A** (1983) 207
Pélissier, J.L., Sodium melting curve calculation. II. A successful perturbation approach **121A** (1983) 217
Pélissier, J.L., Calculation of the melting curve of lead **126A** (1984) 271
Pélissier, J.L., High pressure calculation of the melting curve: Na, K, Rb and Cs **126A** (1984) 384
Pélissier, J.L., Melting of aluminium: a model potential approach up to 2 megabars ... **128A** (1984) 363
Pérez-Madrid, A. and Rubí, J.M., On Brownian motion in fluids with spin. II. Viscoelastic models **126A** (1984) 152
Perk, J.H.H., Capel, H.W., Quispel, G.R.W. and Nijhoff, F.W., Finite-temperature correlations for the Ising chain in a transverse field **123A** (1984) 1
Perk, J.H.H. and Schultz, C.L., Diagonalization of the transfer matrix of a nonintersecting string model **122A** (1983) 50
Perram, J.W., see Morriss, G.P. **129A** (1985) 395
Peruggi, F., Di Liberto, F. and Monroy, G., Some AB-percolation problems in the antiferromagnetic Potts model **123A** (1984) 175
Pesheva, N.Ch., see Brankov, J.G. **122A** (1983) 212
Pesheva, N.Ch., see Brankov, J.G. **129A** (1985) 423
Phariseau, P., see Wille, L. **129A** (1984) 151
Phatak, S.M., see Kenkre, V.M. **128A** (1984) 571
Piotrowski, E., Spin systems in contact with thermostat – kinetic model **121A** (1983) 135

Plakida, N.M., see Vujičić, G.M. ... **128A** (1984) 541
Poland, D., The phase diagram for Fisher's alternate-site lattice gas model ... **126A** (1984) 25
Popa, V.T., see Vlad, M.O. ... **127A** (1984) 333
Pope, C.N., see Duff, M.J. ... **124A** (1984) 219
Posch, H.A., Balucani, U.and Vallauri, R., On the relative dynamics of pairs of atoms in simple liquids ... **123A** (1984) 516
Poschel, J., see Moser, J. ... **124A** (1984) 535
Pottier, N., A Langevin equation approach to non-stationary high-field electron transport ... **121A** (1983) 293
Powles, J.G., The liquid–vapour coexistence line for Lennard-Jones-type fluids ... **126A** (1984) 289
Prasad, M.A. and Unnikrishnan, K., Biased random walk on a multidimensional lattice with absorbing boundaries ... **127A** (1984) 659
Privman, V., Convergence and extrapolation in finite-size scaling renormalization ... **123A** (1984) 428
Privman, V., Finite-size scaling of critical cumulants near the ferromagnetic phase boundary ... **129A** (1984) 220
Przystawa, J., see Oleksy, C. ... **121A** (1983) 145

Quispel, G.R.W., see Perk, J.H.H. ... **123A** (1984) 1
Quispel, G.R.W., Nijhoff, F.W., Capel, H.W. and Van der Linden, J. Bäcklund transformations and singular integral equations ... **123A** (1984) 319
Quispel, G.R.W., Nijhoff, F.W., Capel, H.W. and Van der Linden, J., Linear integral equations and nonlinear difference–difference equations ... **125A** (1984) 344

Rabuffo, I., see Busiello, G. ... **126A** (1984) 195
Rajagopal, A.K. and Wiegel, F.W., Nonexponential decay in relaxation phenomena and the spectral characteristics of the heat bath ... **127A** (1984) 218
Ramani, A., see Bountis, T.C. ... **128A** (1984) 268
Rasetti, M., see Bertotti, G. ... **129A** (1984) 125
Rasetti, M., see Buzano, C. ... **129A** (1984) 165
Reatto, L., see Parola, A. ... **125A** (1984) 255
Redmer, R., see Höhne, F.E. ... **128A** (1984) 643
Redmer, R. and Röpke, G., Quantum statistical approach to the equation of state and the critical point of cesium plasma ... **130A** (1985) 523
Rijpkema, J.J.M. and Knops, H.J.F., Modulated phases in Ising models with diluted frustration ... **122A** (1983) 489
Robjohns, H.L., see Trengove, R.D. ... **128A** (1984) 486
Rodriguez, R., see Combe, Ph. ... **124A** (1984) 561
Rodríguez, R.F., see López de Haro, M. ... **128A** (1984) 535
Rodríguez, R.F. and De la Peña-Auerbach, L., On fluctuation–dissipation theorems for nonequilibrium steady states without detailed balance ... **123A** (1984) 609
Roerdink, J.B.T.M., Some additional remarks on the cumulant expansions for linear stochastic differential equations ... **123A** (1984) 369
Ronis, D., On the derivation of dynamical equations for systems with an interface. III. The solid–liquid interface ... **121A** (1983) 1
Ronis, D., see Satten, G. ... **125A** (1984) 281
Ronis, D., see Satten, G. ... **125A** (1984) 302
Röpke, G., Linear response theory of electrical conductivity of a plasma and improvements of the Lenard–Balescu equation ... **121A** (1983) 92
Röpke, G., see Höhne, F.E. ... **128A** (1984) 643
Röpke, G., see Redmer, R. ... **130A** (1985) 523

Rościszewski, K., Critical properties of the modified Ginzburg–Landau model for the nematic to smectic A phase transition ... **125A** (1984) 412
Rościszewski, K., The mean-field type phase transition from smectic A to smectic C ... **127A** (1984) 634
Rossi, P. and Brihaye, Y., The continuum limit of one-dimensional non-linear models . **126A** (1984) 237
Rubí, J.M., see Pérez-Madrid, A. ... **126A** (1984) 152
Ruijgrok, Th.W., see Sokalski, K. ... **126A** (1984) 280
Ruijgrok, Th.W., see Sokalski, K. ... **130A** (1985) 412
Ryter, D., Lifetime of metastable states: the mean first passage time and a generalized Kramers method ... **130A** (1985) 205

Sá Barreto, F.C. and Fittipaldi, I.P., Thermodynamical properties of the transverse Ising model ... **129A** (1985) 360
Sanchez, J.M., Ducastelle, F. and Gratias, D., Generalized cluster description of multicomponent systems ... **128A** (1984) 334
Sander, L., see Nauenberg, M. ... **123A** (1984) 360
Sannemo, U. and Chao, K.A., Frustration in local environment ... **123A** (1984) 605
Sato, H., see Kikuchi, R. ... **123A** (1984) 227
Sato, I. and Shibata, F., Exciton migration in a fluctuating medium I ... **128A** (1984) 551
Satten, G. and Ronis, D., Fluctuations in finite systems: time reversal symmetry, surface Onsager reciprocal relations and fluctuating hydrodynamics ... **125A** (1984) 281
Satten, G. and Ronis, D., On the implications of surface reciprocal relations for thermophoresis and photophoresis ... **125A** (1984) 302
Sauermann, G. and Karmann, K.-P., Approach to projection operator formalism for second-order response ... **122A** (1983) 375
Schaefer, J. and Köhler, W.E., Quantum calculations of rotational and NMR relaxation, depolarized Rayleigh and rotational Raman line shapes of H_2(HD)–He mixtures ... **129A** (1985) 469
Schmitz, R., see Jones, R.B. ... **122A** (1983) 105
Schmitz, R., see Jones, R.B. ... **122A** (1983) 114
Schmitz, R., see Jones, R.B. ... **125A** (1984) 381
Schmitz, R., see Jones, R.B. ... **126A** (1984) 1
Schram, H.M., see Hijmans, J. ... **121A** (1983) 479
Schram, H.M., see Hijmans, J. ... **125A** (1984) 25
Schram, H.M. and Hijmans, J., Diagrammatic construction of an irreducible basis of algebraic invariants for the sixteen vertex model ... **125A** (1984) 58
Schultz, C.L., see Perk, J.H.H. ... **122A** (1983) 50
Schultz, C.L., Eigenvectors of the multi-component generalization of the six-vertex model ... **122A** (1983) 71
Schwarz, J.H., Spontaneous compactification of extended supergravity in ten dimensions ... **124A** (1984) 543
Segal, E., see Vlad, M.O. ... **127A** (1984) 333
Seiler, R., see Combes, J.M. ... **124A** (1984) 211
Sekimoto, K., Kinetics of magnetization switching in a 1-D system – size distribution of unswitched domains ... **125A** (1984) 261
Sekimoto, K., Kinetics of magnetization switching in a 1-D system II – long time behavior of switched domains ... **128A** (1984) 132
Seneor, R., Constructive approach to critical phenomena ... **124A** (1984) 549
Sengers, J.V., see Van Leeuwen, J.M.J. ... **128A** (1984) 99
Sergiescu, V., see Le Duff, Y. ... **127A** (1984) 347
Shibata, F., see Arimitsu, T ... **123A** (1984) 131

Shibata, F., see Sato, I. **128A** (1984) 551
Shinomoto, S. and Morita, T., Application of the cluster variation method to the hole theory of fluids **127A** (1984) 141
Shlesinger, M., see West, B.J. **127A** (1984) 490
Shumovsky, A.S., see Bogolubov Jr., N.N. **128A** (1984) 82
Shumovsky, A.S., see Bogolubov Jr., N.N. **130A** (1985) 273
Sibani, P. and Van Kampen, N.G., An exactly soluble relaxation problem **122A** (1983) 397
Šimánek, E. and Stein, K., Renormalization and quantum effects in a two-dimensional planar model **129A** (1984) 40
Singh, S., Singh, U.P. and Singh, Y., Perturbation theory for non-axial molecular fluids **121A** (1983) 563
Singh, U.P., see Singh, S. **121A** (1983) 563
Singh, Y., see Singh, S. **121A** (1983) 563
Sinzinkayo, S., see Beckers, J. **126A** (1984) 371
Sirigue, M., see Combe, Ph. **124A** (1984) 561
Sirigue-Collin, M., see Combe, Ph. **124A** (1984) 561
Sivak, H.D., Friedel oscillations in a relativistic quantum plasma **129A** (1985) 408
Škarka, V., Relation between the kinetic equations in the subdynamics approach and the Boltzmann equation for inhomogeneous gases **129A** (1984) 62
Škarka, V. and George, C., A generalization of the van Kampen–Case treatment of the Vlasov equation **127A** (1984) 473
Sobczyk, K., see Kotulski, Z. **123A** (1984) 261
Sobotta, G., Statistical mechanics of quenched inhomogeneous systems with random disorder **123A** (1984) 253
Sobotta, G., Transfer tensor method in statistical mechanics **129A** (1985) 343
Sobotta, G., Transfer tensor method applied to translation invariant models **130A** (1985) 254
Sokalski, K. and Ruijgrok, Th.W., An anti-nematic phase of liquid crystals **126A** (1984) 280
Sokalski, K. and Ruijgrok, Th.W., Bond-moving transformations for continuous-spin systems **130A** (1985) 412
Souillard, B., Some recent results on Schrödinger equations with almost-periodic and random potentials **124A** (1984) 575
Spencer, T., see Fröhlich, J. **124A** (1984) 303
Springborg, M., On semiclassical approximations to Wigner's phase space function ... **126A** (1984) 259
Steiger, U.R., Unified approach to the calculation of inertial corrections in diffusion .. **125A** (1984) 1
Stein, K., see Šimánek, E. **129A** (1984) 40
Stephenson, J. and Couzens, R., Partition function zeros for the two-dimensional Ising model **129A** (1984) 201
Stolz, H., see Kremp, D. **127A** (1984) 646
Stragier, G. and Vansevenant, A., Stability and equilibrium of infinite classical systems. **128A** (1984) 351
Sukhorukov, A.I., see Khalatnikov, I.M. **126A** (1984) 135
Suttorp, L.G., see Cohen, J.S. **123A** (1984) 549
Suttorp, L.G., see Cohen, J.S. **126A** (1984) 308
Suttorp, L.G. and Cohen, J.S., Self-diffusion in a dense magnetized plasma **123A** (1984) 560
Szpilka, A.M., see Huse, D.A. **121A** (1983) 363

Takahashi, Y., see Toyoda, T. **127A** (1984) 529
Taylor, J.H. and Müller, G., Magnetic field effects in the dynamics of alternating or anisotropic quantum spin chains **130A** (1985) 1
Temam, R., Attractors and determining modes in fluid mechanics **124A** (1984) 577
Ten Bosch, B.I.M., Beenakker, J.J.M. and Kuščer, I., Onsager symmetries in field-dependent flows of rarefied molecular gases **123A** (1984) 443

Ten Bosch, B.I.M., see Van Houten, H. **128A** (1984) 371
Theiss, W. and Titulaer, U.M., The systematic adiabatic elimination of fast variables from a many-dimensional Fokker–Planck equation **130A** (1985) 123
Theiss, W. and Titulaer, U.M., Some remarks on the adiabatic elimination of fast variables from coupled Langevin equations **130A** (1985) 143
Thijsse, B.J., see Turfa, A.F. **129A** (1985) 439
Thomasset, F., see Erhel, J. **124A** (1984) 587
Tirapegui, E., see Martinez, S. **122A** (1983) 593
Titulaer, U.M., see Kneller, G.R. **129A** (1984) 81
Titulaer, U.M., see Kneller, G.R. **129A** (1985) 514
Titulaer, U.M., see Theiss, W. **130A** (1985) 123
Titulaer, U.M., see Theiss, W. **130A** (1985) 143
Tjon, J.A., see Hoogeveen, W. **125A** (1984) 163
Tokuyama, M. and Kawasaki, K., Statistical-mechanical theory of coarsening of spherical droplets **123A** (1984) 386
Tonchev, N.S., see Brakov, J.G. **122A** (1983) 252
Toral, R., see Marro, J. **122A** (1983) 563
Tosi, M.P., see Ballone, P. **128A** (1984) 631
Toyoda, T., Gudmundsson, V. and Takahashi, Y., Retarded transverse current–current response functions of a two-dimensional electron gas **127A** (1984) 529
Trappeniers, N.J., Huijser, R.H., Michels, A.C. and Boots, H.M.J., Investigation of multiple scattering contributions to the depolarization of light scattered by carbon dioxide and xenon in the critical region. III. Comparison between theory and experimental results **126A** (1984) 116
Trappeniers, N.J., see Biswas, S.N. **126A** (1984) 384
Trappeniers, N.J., see Van der Putten, D. **129A** (1985) 302
Trappeniers, N.J., see Van der Putten, D. **129A** (1985) 327
Trengove, R.D., Robjohns, H.L. and Dunlop, P.J., Diffusion and thermal diffusion in binary mixtures of sulphur hexafluoride with noble gases **128A** (1984) 486
Truong, T.T., Some novel aspects of Bethe-Ansatz methods for vertex systems **124A** (1984) 603
Tsallis, C., see Costa, U.M.S. **128A** (1984) 207
Turcu, I. and Aldea, A., Self-consistent microscopic approach of the Meissner effect in magnetic superconductors **126A** (1984) 520
Turfa, A.F., Connor, J.N.L., Thijsse, B.J. and Beenakker, J.J.M., A classical dynamics study of Senftleben–Beenakker effects in nitrogen gas **129A** (1985) 439
Turrisi, E., see Ciancio, V. **125A** (1984) 640
Turski, L.A., see Goldstein, P.P. **127A** (1984) 549
Turski, L.A., see Bialynicki-Birula, I. **128A** (1984) 509
Tuszyński, J.A., Dixon, J.M. and Chatterjee, R., The theory of spin correlated crystal fields **127A** (1984) 228
Twelker, H.F., see Bäuerle, G.G.A. **130A** (1985) 553

Umezawa, H., see Kitamura, T. **121A** (1983) 38
Unnikrishnan, K., see Prasad, M.A. **127A** (1984) 659
Uzunov, D.I., Korutcheva, E.R. and Millev, Y.T., Random field effects in classical and quantum critical phenomena **129A** (1985) 535

Vallauri, R., see Posch, H.A. **123A** (1984) 516
Van Baal, C.M., Kinetics of crystalline configurations **129A** (1985) 601
Van Beest, B.W. and Janner, A., Electric field gradient tensor in modulated ionic crys-

tals **122A** (1983) 263
Van den Broek, P.M., Twistor space, Minkowski space and the conformal group **122A** (1983) 587
Van den Broek, P.M., Symmetry transformations in indefinite metric spaces. A generalization of Wigner's theorem **127A** (1984) 599
Van der Linden, J., see Quispel, G.R.W. **123A** (1984) 319
Van der Linden, J., see Quispel, G.R.W. **125A** (1984) 344
Van der Putten, D. and Trappeniers, N.J., Deuteron spin–lattice relaxation of a tunnelling tetrahedral four spin $I = 1$ system **129A** (1985) 302
Van der Putten, D. and Trappeniers, N.J., Proton spin–lattice relaxation of a tunnelling CH_2D_2 molecule **129A** (1985) 327
Van der Zwan, G. and Hynes, J.T., Polarization diffusion and dielectric friction **121A** (1983) 227
Van Dieren, F. and Van Leeuwen, J.M.J., Renormalization of the gas–liquid transition. I. The flow equations **128A** (1984) 383
Van Erkelens, H. and Van Leeuwen, W.A., Relativistic Boltzmann theory for a plasma. X. Electrical conduction of the cosmological fluid **123A** (1984) 72
Van Houten, H., see Breunese, J.N. **126A** (1984) 46
Van Houten, H., Korving, J. and Beenakker, J.J.M., Flow birefringence in gases: the temperature dependence **130A** (1985) 483
Van Houten, H., Baas, F., Marée, P.M.J. and Beenakker, J.J.M., Flow birefringence in binary para hydrogen–noble gas mixtures **130A** (1985) 490
Van Houten, H., see Mazur, E. **130A** (1985) 505
Van Houten, H. and Ten Bosch, B.I.M., Kinetic theory for the volume viscosity in binary mixtures of polyatomic and noble gases **128A** (1984) 371
Van Houten, H. and Beenakker, J.J.M., Flow birefringence in gases at room temperature: new absolute values **130A** (1985) 465
Van Kampen, N .G., see Oppenheim, I. **122A** (1983) 277
Van Kampen, N.G., see Sibani, P. **122A** (1983) 397
Van Leeuwen, J.M.J., see Van Dieren, F. **128A** (1984) 383
Van Leeuwen, J.M.J. and Sengers, J.V., Gravity effects on the correlation length in gases near the critical point **128A** (1984) 99
Van Leeuwen, W.A., see Van Erkelens, H. **123A** (1984) 72
Van Royen, E. and Meijer, P.H.E., Dependence of the phase diagram on the coupling parameters in water-lattice models **127A** (1984) 87
Van Saarloos, W., see Beenakker, C.W.J. **127A** (1984) 451
Vansevenant, A., see Stragier, G. **128A** (1984) 351
Van Vliet, C.M., see Vasilopoulos, P. **121A** (1983) 617
Van Weert, Ch.G., Leermakers, M.C.J., Hooiveld, A.J.W. and Mensonides, F., Normal modes of a relativistic quantum plasma; the one-component plasma **127A** (1984) 388
Varley, R.L. and Zhou, R.-L., A generalized Faxén theorem for two-dimensional Brownian motion **127A** (1984) 363
Vasilopoulos, P. and Van Vliet, C.M., Quantum Boltzmann equations for binary interactions between identical particles **121A** (1983) 617
Veguillas, J., Díaz, M.A. and Palomares, F., On generalized Waldmann–Snider equations **123A** (1984) 463
Veguillas, J., see Díaz Armentia, M. **128A** (1984) 447
Vermesse, J., see Vidal, D. **127A** (1984) 574
Verschelde, H., see Wille, L. **129A** (1984) 151
Vidal, D., Guengant, L. and Vermesse, J., Density and dielectric constant of dense argon and krypton mixtures **127A** (1984) 574
Vieillefosse, P., Internal motion of a small element of fluid in an inviscid flow **125A** (1984) 150

Viswat, E., see Mazur, E. **121A** (1983) 457
Vlad, M.O., Segal, E. and Popa, V.T., A new Hamilton–Jacobi approach for chemical fluctuations **127A** (1984) 333
Vlieger, J., see Wind, M.M. **125A** (1984) 75
Vujičić, G.M. and Plakida, N.M., The dynamics of the two-level system in glasses **128A** (1984) 541

Wakeham, W.A., see Imaishi, N. **123A** (1984) 50
Weaver, D.L., Effective diffusion coefficient for two-dimensional, periodic channels ... **128A** (1984) 565
Weeks, J.D., see Bedeaux, D. **130A** (1985) 88
Wegener, H., see Höhne, F.E. **128A** (1984) 643
Weinert, U., Gaussian basis functions in kinetic theory. I. Incorporation of inelastic processes **121A** (1983) 150
Weinert, U., Gaussian basis functions in kinetic theory. II. Completely transformed kinetic equation **125A** (1984) 497
Weis, J.J., see Levesque, D. **125A** (1984) 270
Weisenborn, A.J., see Mazur, P. **123A** (1984) 209
Weisenborn, A.J. and Mazur, P., The Oseen drag on a circular cylinder revisited **123A** (1984) 191
West, B.J., see Lindenberg, K. **128A** (1984) 25
West, B.J. and Shlesinger, M., Random walk model of impact phenomena **127A** (1984) 490
White, L.R., see Chan, D.Y.C. **122A** (1983) 505
Wiegel, F.W., see Boersma, J. **122A** (1983) 334
Wiegel, F.W., see Rajagopal, A.K. **127A** (1984) 218
Wiegel, F.W., Distribution of the angle of rotation for plane random walks **129A** (1984) 211
Wiegel, F.W. and Boersma, J., The Green function for the half-plane barrier: derivation from polymer entanglement probabilities **122A** (1983) 325
Wille, L., Verschelde, H. and Phariseau, P., Comparison of nearly free electron and tight binding limits in one-dimensional solids **129A** (1984) 151
Willemse, M.W.M., see Mellema, J. **122A** (1983) 286
Williams, M.M.R., The influence of random fluctuations on the behaviour of an aerosol **125A** (1984) 105
Wind, M.M. and Vlieger, J., Optical properties of thin films on rough surfaces **125A** (1984) 75
Wissel, C., Solution of the master equation of a bistable reaction system **128A** (1984) 150
Woolf, L.A., see Easteal, A.J. **121A** (1983) 286
Woolf, L.A., see Easteal, A.J. **127A** (1984) 344

Yajima, K., Quantum dynamics of time periodic systems **124A** (1984) 613
Yannouleas, C., The RPA description of the quantum damped harmonic oscillator **125A** (1984) 549
Yeomans, J.M. and Fisher, M.E., Analysis of the multiphase region in the three-state chiral clock model **127A** (1984) 1
Yngvason, J., States, ideals and automorphisms of the algebra of test functions for quantum fields **124A** (1984) 621
York, Jr., J.W., Initial data for N black holes **124A** (1984) 629
Young, L.-S., Dimension, entropy and Lyapunov exponents in differentiable dynamical systems **124A** (1984) 639
Yu, K.-W., Vibrational spectrum on an exact fractal lattice **128A** (1984) 307

Zabusky, N.J., Computational synergetics and innovation in fluid dynamics **124A** (1984) 647
Zehnder, E., see Conley, C. **124A** (1984) 649
Zheng, W.M., Decay of unstable states: examination of the scaling theory **122A** (1983) 431
Zhou, R.-L., see Varley, R.L. **127A** (1984) 363

Zielinska, B.J.A., see Bedeaux, D. **130A** (1985) 88
Zieliński, J., On the phonon mediated electron–electron interactions **128A** (1984) 296
Zieliński, J., Intermediate valence impurity with a local boson field. Response to external probes **129A** (1985) 626
Zimmermann, R., see Kremp, D. **127A** (1984) 646
Zitserman, V.Yu., see Baibuz, V.F. **127A** (1984) 173

ANALYTIC SUBJECT INDEX

Absorbing barriers (see *Random walk, biased*) **127A** (1984) 659
Adiabatic elimination (see *Kramers model*) **121A** (1983) 269
Adiabatic elimination
– The systematic — of fast variables from a many-dimensional Fokker–Planck equation - Theiss and Titulaer **130A** (1985) 123
– Some remarks on the — of fast variables from coupled Langevin equations - Theiss and Titulaer **130A** (1985) 143
Aerosol
– The influence of random fluctuations on the behaviour of an — - Williams **125A** (1984) 105
Aggregation by diffusion
– Instabilities in continuum equations for — - Nauenberg and Sander **123A** (1984) 360
Alternating spin chain (see *Quantum spin chains*) **130A** (1985) 1
Amphipatic molecules
– Lattice gas model for monolayer of — - Pekalski **129A** (1984) 225
Anderson model (see *Electron–boson coupling*) **129A** (1985) 626
Anderson model (see *Phonon mediated electron–electron interactions*) **128A** (1984) 296
Angle probability distribution
– Distribution of the angle of rotation for plane random walks - Wiegel **129A** (1984) 211
Angular momentum distribution (see *Senftleben–Beenakker effect*) **121A** (1983) 457
Angular momentum polarization
– Flow birefringence in gases at room temperature dependence: new absolute values - Van Houten and Beenakker **130A** (1985) 465
– Flow birefringence in gases: the temperature - Van Houten et al. **130A** (1985) 483
– Flow birefringence in binary para hydrogen–noble gas mixtures - Van Houten et al. . **130A** (1985) 490
– A comparison of data on the viscomagnetic effect, flow birefringence and depolarized Rayleigh line broadening - Mazur et al. **130A** (1985) 505
Anharmonic oscillator (see *Fokker–Planck equation*) **127A** (1984) 113
Anharmonic oscillators
– Analytical expressions for the eigenvalues of — - Fernández et al **122A** (1983) 37
Anisotropic ferromagnets (see *Magnetization switching*) **128A** (1984) 132
Anisotropic lattice (see *Ising model, two-dimensional*) **129A** (1984) 201
Anisotropic spin chain (see *Quantum spin chains*) **130A** (1985) 1
Annealed bond impurities (see *Phase transition temperature*) **127A** (1984) 354
ANNNI model (see *Ising models*) **122A** (1983) 489
Antiferromagnetic systems, linear
– Competitive froms of symmetry breaking in linear antiferromagnetic systems - Caspers and Magnus **130A** (1985) 155
Antikinks, interacting
– Statistical dynamics of interacting kinks I - Kawasaki and Nagai **121A** (1983) 175
Anti-nematic phase (see *Continuous-spin systems*) **130A** (1985) 412
Anti-nematic phase (see *Liquid crystals*) **126A** (1984) 280
Argon–krypton mixtures
– Density and dielectric constant of dense argon and krypton mixtures - Vidal et al. ... **127A** (1984) 574

Array of scatterers, disordered
– Contributions the self-energy of a wave propagating in a disordered array - Mattern and Felderhof **129A** (1985) 550
– Wave propagation in a disordered array of monopole scatterers - Mattern and Felderhof **129A** (1985) 562
Array of spheres
– Wigner solids and diffusion controlled reactions in a regular – - Felderhof. **130A** (1985) 34
Asymmetric Ashkin–Teller model
– Nonuniversality in a model Hamiltonian with four–spin interactions - D'Elía. **130A** (1985) 220
Asymptotic expansions (see *Random walks*) **122A** (1983) 334
Atom velocity distribution function (see *Semiclassical representation method*) **125A** (1984) 519
Atom–electron scattering
– Statistical model of an atom in electron scattering calculations - Jablonski **129A** (1985) 591

Bäcklund transformations
– — and singular integral equations - Quispel et al. **123A** (1984) 319
Balance laws
– On the — extended thermodynamics (ET) for non-ideal gases - Banach **129A** (1984) 95
Baxter–Wu model (see *Multiparameter systems*) **130A** (1985) 171
bcc-structure
– Decay of — and of bond-orientational order in a fluid - Hess **127A** (1984) 509
Becker–Döring equation
– A microscopic derivation of the classical nucleation equation - Marchand and Martin **127A** (1984) 681
Bethe ansatz (see *Star-triangle equations*) **122A** (1983) 71
Bethe ansatz (see *Transfer matrix*) **122A** (1983) 50
Bethe lattice
– A spin-one Ising model on the — - Chakraborty and Morita **129A** (1985) 415
– Spin-glass and ferromagnetic phases of the random-bond Ising model on the — - Morita **125A** (1984) 321
Bethe lattices (see *Potts model, antiferromagnetic*) **123A** (1984) 175
Bethe–Peierls approximation (*see Spin-one Ising model*) **129A** (1985) 415
Bethe–Salpeter equations
– A quantum field theory of crystals near melting temperature - Kitamura and Umezawa **121A** (1983) 38
Bifurcation analysis
– Simplified — of the sixteen vertex model, based on the standard representation of equivalence classes of models - Hijmans. **130A** (1985) 57
Bifurcation classes (see *Sixteen vertex model*) **125A** (1984) 25
Bifurcation models (see *Sixteen vertex model*) **121A** (1983) 479
Binary diffusion (see *Binary sulphur hexafluoride–noble gas mixtures*) **128A** (1984) 486
Binary fcc alloys
– Ordering in — - Bell and Oitmaa **129A** (1984) 17
Binary interactions (see *Particles, identical*) **121A** (1983) 617
Binary mixtures (see *Thermal conductivity*) **126A** (1984) 98
Binary mixtures (see *Thermal conductivity*) **126A** (1984) 301
– Dynamical properties of strongly interacting Brownian particles. III. — - Ohtsuki. ... **122A** (1983) 212
– Thermal conductivity of two — of gases of equal molecular weight - Imaishi et al. ... **123A** (1984) 50
Binary polyatomic–noble gas mixture
– Kinetic theory for the volume viscosity in binary mixtures of polyatomic and noble gases - Van Houten and Ten Bosch **128A** (1984) 371

Binary sulphur hexafluoride–noble gas mixtures
– Diffusion and thermal diffusion in binary mixtures of sulphur hexafluoride with noble gases - Trengove et al. **128A** (1984) 486
Birefringence flow (see *Hydrogen isotopes*) **122A** (1983) 173
Birth and death processes
– On the stochastic modelling of systems with non-local interactions - Malek Mansour and De Palma **128A** (1984) 377
Bistable chemical reaction
– On the stochastic theory of a — - Borgis and Moreau **123A** (1984) 109
Bistable reaction system
– Solution of the master equation of a — - Wissel **128A** (1984) 150
Bloch equation (see *Spin systems*) **121A** (1983) 135
Bloch equations (see *Nuclear magnetic relaxation*) **122A** (1983) 413
Blume–Capel model
– Mean field renormalization group analysis of the — - De Alcantara Bonfim **130A** (1985) 367
Bogoliubov transformation (see *Sixteen vertex model*) **125A** (1984) 425
Boltzmann equation, inhomogeneous
– Relation between the kinetic equations in the subdynamics approach and the Boltzmann equation for inhomogeneous gases - Škarka **129A** (1984) 62
Boltzmann equation, linearized (see *Onsager symmetries*) **123A** (1984) 443
Boltzmann equation, p–q model
Boltzmann equations, quantum
– Quantum Boltzmann equations for binary interactions between identical particles - Vasilopoulos and Van Vliet **121A** (1983) 617
Boltzmann–Vlasov equation (see *Relativistic quantum plasma*) **127A** (1984) 388
Bond-orientational order
– Decay of bcc-structure and of — in a fluid - Hess **127A** (1984) 509
Bond-random Ising model
– The transition from the spin-glass to the ferromagnetic state in the — in the face-centred cubic lattice - Katsura and Matsuno **122A** (1983) 483
Boson system, interacting (see *Condensate, dynamics of*) **121A** (1983) 315
Boson systems, one-dimensional (see *Quantum field theory of crystals*) **121A** (1983) 38
Boson–electron coupling
– Intermediate valence impurity with a local boson field. Response to external probes - Zieliński **129A** (1985) 626
Boundary condition, stick
– The kinetic origin of the stick boundary condition - Oppenheim and Van Kampen .. **122A** (1983) 277
Boundary layer effect
– —s on the rate of diffusion-controlled reactions - Kneller and Titulaer **129A** (1985) 514
Boundary stochastic problems
– —, multistability in the presence of fluctuations and noise-induced phase transitions - Fedchenia **125A** (1984) 577
Boundary wall (see *Many-sphere hydrodynamic interactions*) **127A** (1984) 451
Bounds on dielectric constants (see *Effective dielectric constant*) **126A** (1984) 430
Breit–Darwin approximation (see *Vlasov plasma*) **127A** (1984) 549
Brownian motion
– On — in fluids with spin. II. Viscoelastic models - Pérez-Madrid and Rubí **126A** (1984) 152
Brownian motion (see *Inertial corrections in diffusion*) **125A** (1984) 1
Brownian motion (see *Nuclear magnetic relaxation*) **127A** (1984) 152
Brownian motion, quantum

– Path integral approach to quantum Brownian motion - Caldeira and Leggett **121A** (1983) 587
Brownian motion, two-dimensional
– A generalized Faxén theorem for two-dimensional Brownian motion - Varley and Zhou **127A** (1984) 363
Brownian particle (see *Klein–Kramers equation*) **129A** (1984) 81
Brownian particle (see *Kramers model*) **130A** (1985) 606
Brownian particles (see *Colloidal systems*) **129A** (1985) 374
Brownian particles (see *Diffusion-controlled reactions*) **129A** (1985) 514
Brownian particles, interacting
– On the derivation of an *N*-particle analogue of the Fokker–Planck equation - Brey et al. **121A** (1983) 122
– Cluster expansion of the diffusion kernel of a suspension of interacting Brownian particles - Felderhof and Jones **121A** (1983) 329
Brownian particles, strongly interacting
– Dynamical properties of strongly interacting Brownian particles. III. Binary mixtures - Ohtsuki **122A** (1983) 212
Bulk stochastic equation (see *Topological defects*) **128A** (1984) 1
Burnett method (see *PVT properties*) **126A** (1984) 384

Canonical formulation, gauge-independent (see *Relativistic plasma theory*) **128A** (1984) 509
Canonical transformation (see *Fluid dynamics*) **127A** (1984) 265
Canonical transformation (see *Phonon mediated electron–electron interactions*) **128A** (1984) 296
Canonical transformations (see *Unitary transformations*) **121A** (1983) 576
Carbon dioxide (see *Multiple scattering*) **126A** (1984) 116
Cascade-type process (see *Two-photon processes*) **130A** (1985) 273
Cayley tree (see *Ising model, random-bond*) **125A** (1984) 321
Cayley tree (see *Multicomponent spin models*) **122A** (1983) 313
Cayley tree (see *q-state Potts model*) **125A** (1984) 625
Cayley tree (see *Spin-one Ising model*) **129A** (1985) 415
Cesium plasma
– Quantum statistical approach to the equation of state and the critical point of — - Redmer and Röpke **130A** (1985) 523
Chaotic behavior (see *Exactly solvable models*) **130A** (1985) 597
Chapman–Enskog approximation (see *Viscomagnetic diffusion*) **126A** (1984) 46
Chapman–Enskog method (see *Adiabatic elimination*) **130A** (1985) 123
Chapman–Enskog theory (see *Binary polyatomic–noble gas mixture*) **128A** (1984) 371
Chapman–Enskog theory (see *Binary sulphur hexafluoride–noble gas mixtures*) **128A** (1984) 486
Charged particle system (see *Wigner function, gauge independent*) **130A** (1985) 565
Chemical relaxation
– The Kramers model of — in the presence of a radiation field - Marchesoni and Grigolini **121A** (1983) 269
Chemical shift (see *Nuclear magnetic relaxation*) **127A** (1984) 152
Chiral clock model
– Analysis of the multiphase region in the three-state — - Yeomans and Fisher **127A** (1984) 1
Chiral discrimination (see *Stereoisomers, gaseous*) **123A** (1984) 586
Chiral molecules (see *Stereoisomers, gaseous*) **123A** (1984) 586
Chiral-symmetry breaking
– Chiral-symmetry-breaking states and their sensitivity in nonequilibrium chemical systems - Kondepudi and Nelson **125A** (1984) 465
Cholesteric phase (see *Liquid crystals*) **121A** (1983) 107

CH_2D_2 molecule
– Proton spin–lattice relaxation of a tunnelling — - Van der Putten and Trappeniers .. **129A** (1985) 327
Classical nucleation (see *Becker–Döring equation*) **127A** (1984) 681
Classical plasma
– Theory of the interface between a — and a hard wall - Ballone et al. **128A** (1984) 631
Classical spin models
– Transfer tensor method in statistical mechanics - Sobotta **129A** (1985) 343
Classical trajectories (see *N_2–N_2 system*) **129A** (1985) 439
Cluster expansion (see *Diffusion coefficient*) **121A** (1983) 329
Cluster expansion (see *Optical potential*) **128A** (1984) 404
Cluster expansion (see *Scalar wave propagation*) **129A** (1985) 550
Cluster functions (see *Cluster variation method*) **128A** (1984) 334
Cluster theory, optimized (see *Perturbation approach*) **121A** (1983) 217
Cluster variation method (see *Hole theory of fluids*) **127A** (1984) 141
Cluster variation method
– Generalized cluster description of multicomponent systems - Sanchez et al. **128A** (1984) 334
– Long term behavior of phase separation; computations with the non-homogeneous, time dependent cluster variation method - Bodegom and Meijer **122A** (1983) 13
– The — and the method of the reducibility of density matrices - Katsura and Kikuchi. **123A** (1984) 595
Coagulation process (see *Random fluctuations on the behaviour of an aerosol*) **125A** (1984) 105
Coarsening of spherical droplets
– Statistical-mechanical theory of — - Tokuyama and Kawasaki **123A** (1984) 386
Coherent states, generalized
– Random walk on the homogeneous spaces of a group and generalized coherent states **129A** (1984) 125
Collision operator (see *Klein–Kramers equation*) **129A** (1984) 81
Collision operator (see *Rayleigh gas*) **127A** (1984) 194
Collision processes (see *Diatomic gas*) **128A** (1984) 178
Collisions, molecules–wall (see *Boundary condition, stick*) **122A** (1983) 277
Colloidal systems
– Multiple Rayleigh–Gans–Debye scattering in — - dynamic light scattering - Dhont. . **129A** (1985) 374
Combination scattering process (see *Two-photon processes*) **130A** (1985) 273
Commensurate phases
– Analysis of the multiphase region in the three-state chiral clock model - Yeomans and Fisher **127A** (1984) 1
Commensurate–disordered phase boundary (see *Three-state chiral clock model*) **121A** (1983) 363
Concentrated suspensions (see *Diffusion coefficient*) **126A** (1984) 349
Condensate, dynamics of
– Microscopic approach for dynamics of condensate near the transition temperature - Ichiyanagi and Ohya **121A** (1983) 315
Condensation rate (see *Random fluctuations on the behaviour of an aerosol*) **125A** (1984) 105
Conductivity of a plasma, electrical (see *Linear response theory*) **121A** (1983) 92
Conformal group
– Twistor space, Minkowski space and the — - Van den Broek **122A** (1983) 587
Conformal symmetry (see *Invariance conditions*) **126A** (1984) 371
Constant-coupling approximation (see *Order–disorder transition*) **129A** (1984) 17
Contact transformations (see *Metrics in classical thermodynamics*) **125A** (1984) 631
Continued fraction representation (see *Ising model, transverse*) **125A** (1984) 124
Continued fraction (see *Kramers model*) **121A** (1983) 269
Continuous-spin systems
– Bond-moving transformations for — - Sokalski and Ruijgrok **130A** (1985) 412

Continuum limit (see *One-dimensional non-linear systems*) **126A** (1984) 237
Continuum method, statistical (see *Viscosity, effective*) **122A** (1983) 286
Correlation function (see *Gaussian column model*) **130A** (1985) 88
Correlation function (see *Spin–lattice models*) **130A** (1985) 254
Correlation functions (see *Fluctuation effects*) **126A** (1984) 135
Correlation functions (see *Renormalization transformation*) **128A** (1984) 383
Correlation functions (see *Transport coefficients, generalized*) **122A** (1983) 129
Correlation length (see X–Y model) **127A** (1984) 613
– Gravity effects on the — in gases near the critical point - Van Leeuwen and Sengers . **128A** (1984) 99
Correlations, decay of (see *Lorentz gas*) **121A** (1983) 523
Couette flow cell (see *Flow birefringence*) **130A** (1985) 465
Couette flow cell (see *Flow birefringence*) **130A** (1985) 483
Couette flow cell (see *Flow birefringence*) **130A** (1985) 490
Coupled order parameters (see *Phase transitions*) **121A** (1983) 145
Critical behaviour (see *Random field effects*) **126A** (1984) 195
– Phenomenological renormalization of multi-parameter systems - Barber **130A** (1985) 171
Critical binary fluids (see *Topological defects*) **128A** (1984) 1
Critical exponent (see *Cubic model, n-component*) **129A** (1984) 1
Critical exponents (see *Continuous-spin systems*) **130A** (1985) 412
Critical exponents (see *Finite-size scaling renormalization*) **123A** (1984) 428
Critical exponents (see *Fisher's alternate-site lattice gas model*) **126A** (1984) 25
Critical exponents (see *Ising model, three-dimensional*) **128A** (1984) 529
Critical exponents (see *Potts model, q-state random*) **128A** (1984) 207
Critical exponents (see *Renormalization group*) **125A** (1984) 412
Critical phenomena (see *Finite-size scaling*) **129A** (1984) 220
– Random field effects in classical and quantum — - Uzunov et al. **129A** (1985) 535
Critical point (see *Correlation length*) **128A** (1984) 99
Critical properties (see *Lattice gas model*) **125A** (1984) 255
Critical properties (see *Multiple scattering*) **126A** (1984) 116
Critical properties (see *Potts model, triangular*) **123A** (1984) 577
Critical region (see *PVT properties*) **126A** (1984) 384
Critical temperature (see *Cesium plasma*) **130A** (1985) 523
Critical temperature (see *Ising model, transverse*) **129A** (1985) 360
Cross section, effective (see *N_2–N_2 system*) **129A** (1985) 439
Crossover phenomena (see *Random field effects*) **126A** (1984) 195
Crystal fields, spin correlated
– The theory of spin correlated crystal fields - Tuszyński et al. **127A** (1984) 228
Crystal kinetics
– Kinetics of crystalline configurations - Van Baal **129A** (1985) 601
Crystal lattice
– Bond-moving transformations for continuous-spin systems - Sokalski and Ruijgrok . **130A** (1985) 412
Cubic model, n-component
– The temperature exponent of the *n*-component cubic model - Blöte and Nightingale **129A** (1984) 1
Cumulant expansion (see *Stochastic differential equations, linear*) **123A** (1984) 369
Curie temperature (see *Spin-one Ising model*) **129A** (1985) 415
Current–current response functions
– Retarded transverse — of a two-dimensional electron gas - Toyoda et al. **127A** (1984) 529

Damping effects (see *Fermion elementary excitations*) **123A** (1984) 279
Damping of elementary excitations

– On the damping of an elementary excitation of the quantum system interacting with a gaussian random field - Abdumalikov and Abdullaev. **123A** (1984) 625
Damping operator
– A solvable model of microscopic frequency modulation. II. Rigorous treatment of the — - Ban and Arimitsu. **129A** (1985) 455
Damping theory (see *Frequency modulation, microscopic*) **123A** (1984) 131
Debye limit
– — of the stochastic rotation operator - McConnell **128A** (1984) 611
Debye region (see *Hydrogen, fluid*) **130A** (1985) 587
Decorated Ising model
– Two-dimensional — with classical vector spins and Ising spins of magnitude *s* - Gonçalves and Horiguchi **127A** (1984) 587
Decoupling point (see *Four-spin interactions*) **130A** (1985) 220
Degenerate Fermi systems
– Ladder approximation of the equation of state for — - Kremp et al. **127A** (1984) 646
Density effects (see *Thermal conductivity*) **126A** (1984) 98
Density expansions (see *Irreversible processes on lattices*) **123A** (1984) 297
Density functional
– Thermodynamic properties of inhomogeneous fluids - Boiteux and Kerins **121A** (1983) 399
Density matrices
– The cluster variation method and the method of the reducibility of — - Katsura and Kikuchi **123A** (1984) 595
Density operator (see *Quantum damped oscillator*) **130A** (1985) 353
Density (see *Argon–krypton mixtures*) **127A** (1984) 574
Density-functional formalism
– Hohenberg–Kohn theorem and non-*V*-representable densities - Englisch and Englisch **121A** (1983) 253
Depolarization effect (see *Dipole–induced-dipole light scattering*) **127A** (1984) 347
Depolarization of light
– Investigation of multiple scattering contributions to the — scattered by carbon dioxide and xenon in the critical region. III. Comparison between theory and experimental results - Trappeniers et al. **126A** (1984) 116
Depolarized light scattering (see *Light scattering, dynamic*) **129A** (1985) 374
Deposition rate (see *Random fluctuations on the behaviour of an aerosol*) **125A** (1984) 105
Devil's staircase
– — in a one-dimensional mapping - Horiguchi and Morita **126A** (1984) 328
– Fractal dimension related to — for a family of piecewise linear mappings - Horiguchi and Morita **128A** (1984) 289
Diagrammatic analysis (see *Kinetic theory, linear*) **127A** (1984) 38
Diagrammatic construction (see *Sixteen vertex model*) **125A** (1984) 58
Diatomic gas
– Kinetic theory for a weakly-associated — with reactions - Lagan and McLennan. . . . **128A** (1984) 178
Dicke model
– Exact analysis of the fluorescent — in the thermodynamic limit - Khandekar et al. . . **130A** (1985) 323
Dicke-type model
– On the kinetics of — - Bogolubov et al. **128A** (1984) 82
Dielectric constant (see *Argon–krypton mixtures*) **127A** (1984) 574
– The — of dipolar discs - Morriss and Perram **129A** (1985) 395
Dielectric friction
– Polarization diffusion and — - Van der Zwan and Hynes **121A** (1983) 227

Dielectric properties
– On the calculation of — from computer simulations - Levesque and Weis **125A** (1984) 270
Dielectric relaxation (see *Stochastic rotation operator*) **128A** (1984) 611
Diffusion
– — in a potential field: path-integral approach - Baibuz et al. **127A** (1984) 173
Diffusion coefficient (see *Crystal kinetics*) **129A** (1985) 601
Diffusion coefficient (see *Suspension of spheres*) **128A** (1984) 48
– Cluster expansion of the diffusion kernel of a suspension of interacting Brownian particles - Felderhof and Jones **121A** (1983) 329
– Diffusion of spheres in a concentrated suspension II - Beenakker and Mazur **126A** (1984) 349
Diffusion coefficient, generalized
– Exact and approximate generalized diffusion equation for the Lorentz gas - Paszkiewicz **123A** (1984) 161
Diffusion constant (see *Fokker–Planck equation*) **127A** (1984) 113
Diffusion controlled reactions
– Wigner solids and — in a regular array of spheres - Felderhof **130A** (1985) 34
Diffusion flux (see *Viscomagnetic diffusion*) **126A** (1984) 46
Diffusion limit theorem
– The limit diffusion mechanism of relaxation for spin systems - Papiez **122A** (1983) 413
Diffusion (see *N_2–noble gas mixtures*) **123A** (1984) 412
Diffusion (see *Random channel*) **122A** (1983) 602
Diffusion (see *Self-diffusion coefficient*) **122A** (1983) 89
Diffusion species
– Sum rules $S_{\alpha\beta}(k,\omega)$ for two — - Arauz-Lara and Median-Noyola **122A** (1983) 547
Diffusion, thermal
– Statistical mechanics of thermal diffusion - Kikuchi et al. **123A** (1984) 227
Diffusion-controlled reactions
– Boundary layer effects on the rate of — - Kneller and Titulaer **129A** (1985) 514
Dipolar and quadrupolar interactions (see *Spin-one Ising model*) **129A** (1985) 415
Dipolar discs (see *Polar fluid*) **129A** (1985) 395
Dipolar matrix (see *Spin–lattice relaxation*) **129A** (1985) 327
Dipole fluctuations (see *Fluctuation–dissipation theorem*) **128A** (1984) 467
Dipole in a sphere (see *Polarization diffusion*) **121A** (1983) 227
Dipole–dipole correlation function (see *Dipole–dipole interaction*) **125A** (1984) 270
Dipole–dipole dispersion forces
– The — between spherical atoms from the Callen–Welton linear response theory - Battezzati **125A** (1984) 591
Dipole–dipole interaction (see *Three-level atoms*) **127A** (1984) 407
Dipole–dipole interaction (see *Two-atom Hanle-type resonance spectra*) **125A** (1984) 398
– On the calculation of dielectric properties from computer simulations - Levesque and Weis **125A** (1984) 270
Dipole–induced-dipole light scattering
– On a pair-potential-independent criterion for D.I.D. light scattering - Le Duff and Sergiescu **127A** (1984) 347
Dirac field (see *Spin-$\frac{1}{2}$ particle*) **130A** (1985) 553
Dirac–Weyl equation (see *Spin-$\frac{1}{2}$ particle*) **130A** (1985) 553
Discontinuous transition (see *Schlögl model*) **128A** (1984) 150
Dislocation transport (see *Impact phenomena*) **127A** (1984) 490
Disordered array of scatterers
– Optical potential of a — - Felderhof and Mattern **128A** (1984) 404

Dispersion relations (see *Relativistic plasmas, classical dilute*) **123A** (1984) 617
Dispersions
– Effective viscosity of — approached by a statistical continuum method - Mellema and Willemse **122A** (1983) 286
Dissipative interaction (see *Path integral*) **121A** (1983) 587
Distribution function (see *Coarsening of spherical droplets*) **123A** (1984) 386
Distribution functions (see *Langevin-type equations stochastic*) **123A** (1984) 535
Drag coefficient (see *Oseen drag*) **123A** (1984) 191
Drag coefficient (see *Oseen drag*) **123A** (1984) 209
Drag force (see *Oseen drag*) **123A** (1984) 209
Drift-tube theory (see *Kinetic theory*) **121A** (1983) 150
Droplet geometry (see *Becker–Döring equation*) **127A** (1984) 681
Droplet model (see *Equilibrium cluster distribution*) **122A** (1983) 563
Droplets
– Some AB-percolation problems in the antiferromagnetic Potts model - Peruggi et al. **123A** (1984) 175
Droplets, growth rates of (see *Dynamic-scaling theory*) **123A** (1984) 497
Duffing oscillator
– Renormalized equations for a weakly nonlinear — - Brey et al. **123A** (1984) 481
Dynamical screening (see *Self-diffusion*) **126A** (1984) 308
Dynamic correlation functions (see *Quantum spin chains*) **130A** (1985) 1
Dynamic light scattering (see *Diffusion species*) **122A** (1983) 547
Dynamic susceptibility (see *Second-order response*) **122A** (1983) 375
Dynamical properties (see *Easy-plane ferromagnets*) **126A** (1984) 416
Dynamical systems, model
– On a class of model dynamical systems - De Haan **122A** (1983) 345
Dynamic-scaling theory
– — for phase-separating unmixing mixtures: growth rates of droplets and scaling properties of autocorrelation functions - Furukawa **123A** (1984) 497

Easy-plane ferromagnets
– Spin waves in the — Garanin and Lutovinov **126A** (1984) 416
Effective dielectric constant
– Bounds for the compex dielectric constant of a two-phase composite - Felderhof **126A** (1984) 430
Effective diffusion coefficient
– — for two-dimensional, periodic channels - Weaver **128A** (1984) 565
Effective elasticity (see *Suspension of spheres*) **126A** (1984) 1
– — of a solid suspension of spheres. I. Stress–strain constitutive relation - Jones and Schmitz **125A** (1984) 381
Effective interaction (see *Hole theory of fluids*) **127A** (1984) 141
Effective modulus (see *Suspension of spheres*) **126A** (1984) 1
Eigenvalues (see *Anharmonic oscillators*) **122A** (1983) 37
Eight-vertex model (see *Sixteen vertex model*) **121A** (1983) 479
Eight-vertex model (see *Multiparameter systems*) **130A** (1985) 171
– Nonuniversality in a model Hamiltonian with four-spin interactions - D'Elía **130A** (1985) 220
Elastic medium, compressible (see *Elasticity*) **122A** (1983) 114
Elastic medium, incompressible (see *Elasticity*) **122A** (1983) 105
Elasticity
– Isotropic elastic medium containing a spherical particle. I. Incompressible media - Jones and Schmitz **122A** (1983) 105
– Isotropic elastic medium containing a spherical particle. II. Compressible media -

Jones and Schmitz **122A** (1983) 114
Electric conduction
– A thermodynamic approach to heat and — in solids - Llebot et al. **121A** (1983) 552
Electric conductivity (see *Electrolytes*) **122A** (1983) 441
Electric dipole moment (see *Electrohydrodynamics*) **122A** (1983) 383
Electric field gradient tensor
– — in modulated ionic crystals - Van Beest and Janner **122A** (1983) 263
Electrical conduction
– Relativistic Boltzmann theory for a plasma. X. — of the cosmological fluid - Van Erkelens and Van Leeuwen **123A** (1984) 72
Electrohydrodynamics
– Reciprocity in — - Felderhof **122A** (1983) 383
Electrolytes
– The electric conductivity of stationary and homogeneous — up to concentrations $c \approx 1$ mol/l and high electric fields - Lessner **122A** (1983) 441
Electromagnetic waves (see *Reflection amplitude*) **128A** (1984) 229
Electron transport, high-field (see *High-electric field*) **121A** (1983) 293
Electron–atom scattering
– Statistical model of an atom in electron scattering calculations - Jablonski **129A** (1985) 591
Electron–boson coupling
– Intermediate valence impurity with a local boson field. Response to external probes - Zieliński **129A** (1985) 626
Electrostatic potential
– On the — due to a slab shaped and a semi-infinite NaCl-type lattice - Nijboer **125A** (1984) 275
Elementary excitations (see *Heisenberg alternating antiferromagnetic spin-$^1/_2$ chain*) **126A** (1984) 177
Elimination of boson variables (see *Two-photon processes*) **130A** (1985) 273
Ellipsometric coefficient (see *Thin film on a rough surface*) **125A** (1984) 75
Emulsions (see *Dispersions*) **122A** (1983) 286
Energy band calculation
– Comparison of nearly free electron and tight binding limits in one-dimensional solids - Wille et al **129A** (1984) 151
Energy dissipation (see *RPA dynamics*) **125A** (1984) 549
Energy–momentum tensor (see *Relativistic thermomechanics*) **127A** (1984) 282
Enskog theory, first order (see *Kinetic theory of field effects*) **121A** (1983) 430
Entropy functionals
– — associated to the shifts dynamical systems - Martinez and Tirapegui **122A** (1983) 593
Equation of motion (see *Kinetic theory*) **121A** (1983) 135
Equation of state (see *Plasmas, nonideal*) **127A** (1984) 72
Equations of motion (see *Molecule, specific model*) **122A** (1983) 363
Equilibrium and stability (see *Infinite classical systems*) **128A** (1984) 351
Equilibrium cluster distributions
– — of the three-dimensional Ising model in the one phase region - Marro and Toral .. **122A** (1983) 563
Equivalence classes (see *Sixteen vertex model*) **130A** (1985) 57
Erratum
– The cluster variation method and the method of the reducibility of density matrices - Katsura and Kikuchi [Physica **123A** (1984) 595] **127A** (1984) 692
Erratum
– The electric conductivity of stationary and homogeneous electrolytes up to concentrations $c \approx 1$ mol/l - Lessner [Physica **116A** (1982) 272] **126A** (1984) 300
Erratum

– Path integral approach to quantum Brownian motion - Caldeira and Leggett [Physica **121A** (1983) 587] **130A** (1985) 374
Eulerian variational principle (see *Fluid dynamics*) **127A** (1984) 265
Exactly solvable models
– — showing chaotic behavior - Katsura and Fukuda **130A** (1985) 597
Exactly solvable models
– On the metal–insulator phase transition in two — - Brankov and Pesheva **122A** (1983) 231
Excitation spectrum (see *Three-level atoms*) **127A** (1984) 407
Excited-state energies (see *Density-functional formalism*) **121A** (1983) 253
Exciton migration
– — in a fluctuating medium I - Sato and Shibata **128A** (1984) 551
Explosive behavior
– Stochastic analysis of —: a qualitative approach - Frankowicz et al. **125A** (1984) 237
Extended irreversible thermodynamics
– Effects of spatial variations in — - López de Haro et al. **128A** (1984) 535
Extended thermodynamics
– On the balance laws of — (ET) for non-ideal gases - Banach **129A** (1984) 95
Extinction theorem
– On the generalized linear response functions - Obada et al. **130A** (1985) 292

Far from equilibrium
– The role of thermodynamic representations in the study of fluids in — steady states - Garibay-Jiménez and García-Colin **130A** (1985) 616
Fast variables
– The systematic adiabatic elimination of — from a many-dimensional Fokker–Planck equation - Theiss and Titulaer **130A** (1985) 123
– Some remarks on the adiabatic elimination of — from coupled Langevin equations - Theiss and Titulaer **130A** (1985) 143
Faxén theorem (see *Suspension of spheres*) **126A** (1984) 1
– A generalized — for two-dimensional Brownian motion - Varley and Zhou **127A** (1984) 363
Fermion elementary excitations
– Spectral density approach for the damping of — in an anisotropic spin-$\frac{1}{2}$ linear chain - Campana et al. **123A** (1984) 279
Fermion systems, one-dimensional (see *Quantum field theory of crystals*) **121A** (1983) 38
Ferromagnetic phase boundary
– Finite-size scaling of critical cumulants near the — - Privman **129A** (1984) 220
Ferromagnetic phase (see *Ising model, random-bond*) **125A** (1984) 321
Ferromagnetic state (see *Bond-random Ising model*) **122A** (1983) 483
Feynman–Vernon theory (see *Path integral*) **121A** (1983) 587
Field effects (see *Kinetic theory of field effects*) **121A** (1983) 430
Field effects (see *Viscosity*) **121A** (1983) 457
Finite correlation time effects
– — in nonequilibrium phase transitions. II. Some exact moments results - Cortes and Lindenberg **123A** (1984) 99
– — in nonequilibrium phase transitions. III. Multi-degree-of-freedom systems - Lindenberg and West **128A** (1984) 25
Finite scaling (see *Ising model, three-dimensional*) **128A** (1984) 529
Finite-size scaling (see *Cubic model, n-component*) **129A** (1984) 1
– — of critical cumulants near the ferromagnetic phase boundary - Privman **129A** (1984) 220
Finite-size scaling renormalization

– Convergence and extrapolation in — - Privman **123A** (1984) 428
Finite-temperature correlations (see *Ising chain*)..... **123A** (1984) 1
Fisher's alternate-site lattice gas model
– The phase diagram for — - Poland **126A** (1984) 25
Flexible rods
– Isotropic–nematic phase transition in a system of slightly flexible long thin rods - Ohtsuki **121A** (1983) 513
Flow birefringence
– — in gases at room temperature: new absolute values - Van Houten and Beenakker . **130A** (1985) 465
– — in gases: the temperature dependence - Van Houten et al. **130A** (1985) 483
– — in binary para hydrogen–noble gas mixtures - Van Houten et al. **130A** (1985) 490
– A comparison of data on the viscomagnetic effect, — and depolarized Rayleigh line broadening - Mazur et al..... **130A** (1985) 505
Flow equations (see *Renormalization transformation*) **128A** (1984) 383
Fluctuating hydrodynamics (see *Nonequilibrium fluctuations*)..... **126A** (1984) 443
Fluctuating hydrodynamics (see *Steady states*) **130A** (1985) 616
Fluctuating medium
– Exciton migration in a — I - Sato and Shibata **128A** (1984) 551
Fluctuation effects
– — in two-dimensional hydrodynamic systems - Khalatnikov et al..... **126A** (1984) 135
Fluctuation phenomena (see *Number fluctuation model*)..... **123A** (1984) 149
Fluctuation–dissipation theorem (see *Langevin equation*)..... **121A** (1983) 293
– Kirchhoff–Planck law for freely radiating bodies and — - Eckhardt **128A** (1984) 467
Fluctuation–dissipation theorems
– On — for nonequilibrium steady states without detailed balance - Rodríguez and De la Peña-Auerbach..... **123A** (1984) 609
Fluctuations (see *RPA dynamics*) **125A** (1984) 549
Fluctuations, chemical
– A new Hamilton–Jacobi approach for chemical fluctuations - Vlad et al. **127A** (1984) 333
Fluctuations, Gaussian (see *Finite correlation time effects*) **128A** (1984) 25
Fluctuations in finite systems
– —: time reversal symmetry, surface Onsager reciprocal relations and fluctuating hydrodynamics - Satten and Ronis **125A** (1984) 281
Fluctuations, quantum (see *Vortex unbinding transition*) **129A** (1984) 40
Fluid dynamics
– Canonical transformations and variational principles for — - Griffa **127A** (1984) 265
Fluid with spin (see *Brownian motion*) **126A** (1984) 152
Fluids (see *Non-axial molecular fluids*)..... **121A** (1983) 563
Fluids, compressible and incompressible (see *Hydrodynamic fluctuation forces*) **122A** (1983) 505
Fluorescence (see *Dicke model*)..... **130A** (1985) 323
Fluorescence (see *Two-photon resonance fluorescence*) **121A** (1983) 309
Fokker–Planck equation (see *Adiabatic elimination*) **130A** (1985) 143
Fokker–Planck equation (see *Diffusion*)..... **127A** (1984) 173
Fokker–Planck equation (see *Inertial corrections in diffusion*) **125A** (1984) 1
Fokker–Planck equation (see *Kramers model*)..... **130A** (1985) 606
Fokker–Planck equation (see *Langevin-type equations, stochastic*) **123A** (1984) 535
Fokker–Planck equation (see *Path integral*) **121A** (1983) 587
Fokker–Planck equation (see *Quantum damped oscillator*) **130A** (1985) 353
– Numerical estimation of the path integral, and the diffusion in an anharmonic oscillator - Morita and Hara **127A** (1984) 113

– On the Langevin formalism for nonlinear and non-equilibrium hydrodynamic fluctuations - Morozov **126A** (1984) 443
– On the derivation of an *N*-particle analogue of the — - Brey et al..... **121A** (1983) 122
– Search for the symmetry of the — - An et al..... **128A** (1984) 520
– Solution of the — with spatial coordinate-dependent moments in many dimensions - Morita and Hara **125A** (1984) 607
– The systematic adiabatic elimination of fast variables from a many-dimensional — - Theiss and Titulaer **130A** (1985) 123
Fokker–Planck equation, nonlinear (see *Fluctuation–dissipation theorems*)..... **123A** (1984) 609
Fokker–Planck equation, nonlinear (see *Scaling theory*) **122A** (1983) 431
Fokker–Planck equations, generalized (see *Lennard-Jones fluid*) **123A** (1984) 516
Foldy–Wouthuysen transformation (see *Spin-$\frac{1}{2}$ particle*) **130A** (1985) 553
Four-spin interactions
– Nonuniversality in a model Hamiltonian with — - D'Elía..... **130A** (1985) 220
– Ising model with two-spin interactions and — on the square lattice - Horiguchi **130A** (1985) 194
Fractal dimension (see *Devil's staircase*) **128A** (1984) 289
Fractal lattice
– Vibrational spectrum on an exact — - Yu **128A** (1984) 307
Free energy density, thermodynamic limit of
– On the exact mean-field description of continuous quantum systems in equilibrium II - Maćkowiak..... **121A** (1983) 59
Free energy (see *Multicomponent systems*) **128A** (1984) 334
Freely radiating bodies (see *Kirchhoff–Planck law*)..... **128A** (1984) 467
Frenkel excitons (see *Quasiparticles in solids*)..... **128A** (1984) 571
Frequency modulation, microscopic
– A solvable model of microscopic frequency modulation. I. Conventional treatment of the damping operator - Arimitsu et al **123A** (1984) 131
– A solvable model of microscopic frequency modulation. II. Rigorous treatment of the damping operator - Ban and Arimitsu **129A** (1985) 455
Friction tensor (see *Many-sphere hydrodynamic interactions*)..... **127A** (1984) 451
Friedel oscillations
– — in a relativistic quantum plasma - Sivak **129A** (1985) 408
Frustration (see *Ising models*) **122A** (1984) 489
Frustration effect (see *Frustration in local environment*)..... **123A** (1984) 605
Frustration in local environment
– — - Sannemo and Chao **123A** (1984) 605
Frustration (see *Ising models*) **122A** (1983) 489
Functional method (see *Summation of perturbation series*) **128A** (1984) 589

Gapless phonons (see *Quantum field theory of crystals*) **121A** (1983) 38
Gas–liquid transition
– Renormalization of the —. I. The flow equations - Van Dieren and Van Leeuwen ... **128A** (1984) 383
Gauss transformation
– Gaussian basis functions in kinetic theory. II. Completely transformed kinetic equation - Weinert **125A** (1984) 497
Gaussian collision function (see *Gauss transformation*)..... **125A** (1984) 497
Gaussian column model
– Structure of the liquid–vapor interface using a — with a variable interaction range - Bedeaux et al..... **130A** (1985) 88
Gaussian–Markoff process (see *Fluctuating medium*)..... **128A** (1984) 551

Gaussian random fields (see *Damping of elementary excitations*) **123A** (1984) 625
Gaussian wave-packet representation
- Quantum mechanics in the Gaussian wave-packet phase space representation - Mizrahi **127A** (1984) 241
Gibbs state (see *Infinite classical systems*) **128A** (1984) 351
Ginzburg–Landau equation, time-dependent (see *Statistical dynamics*) **121A** (1983) 175
Ginzburg–Landau model (see *Smectic A–C phase transition*) **127A** (1984) 634
Ginzburg–Landau model
- Critical properties of the modified — for the nematic to smectic A phase transition - Rościszewski **125A** (1984) 412
Glauber model (see *Spin-one system*) **122A** (1983) 1
Gravitational field
- On the non-relativistic limit of a spin-$\frac{1}{2}$ particle in a classical — - Bäuerle and Twelker **130A** (1985) 553
Gravity effects (see *Correlation length*) **128A** (1984) 99
Green's function
- The — for the half-plane barrier: derivation from polymer entanglement probabilities - Wiegel and Boersma **122A** (1983) 325
Green's functions
- Use of temperature- — for calculation of second-order susceptibilities - Collet **121A** (1983) 85
Green's functions, one-particle
- Exact solutions for one-particle Green's functions in random one-dimensional systems - Nieuwenhuizen **125A** (1984) 197
Group-state energies (see *Density-functional formalism*) **121A** (1983) 253

Haken–Zwanzig model (see *Langevin equations*) **130A** (1985) 143
Half-plane barrier
- The Green's function for the —: derivation from polymer entanglement probabilities - Wiegel and Boersma **122A** (1983) 325
Hamilton–Jacobi approach (see *Fluctuations, chemical*) **127A** (1984) 333
Hard spheres (see *Suspension of hard spheres*) **122A** (1983) 89
Hard wall interface (see *Classical plasma*) **128A** (1984) 631
Hard-core fluid (see *Percus–Yevick equation*) **127A** (1984) 667
Hard-sphere fluid (see *Kinetic theory, linear*) **127A** (1984) 38
- Self-diffusion in a dense — : a molecular dynamics simulation - Easteal et al. **121A** (1983) 286
Hard-spheres diffusion coefficient (see *Molecular dynamics simulations*) **127A** (1984) 344
Harmonic oscillator approximation (see *Symmetry breaking*) **130A** (1985) 155
He, liquid
- Separable interactions and liquid ^{3}He. III. Landau expansion in the presence of a Hubbard interaction - Nijhoff et al. **130A** (1985) 375
Harmonic oscillator, random (see *Random physical process*) **123A** (1984) 261
Harmonic oscillator (see *Membrane–particle coupling*) **129A** (1985) 503
Hartree limit (see *Random field effects*) **126A** (1984) 195
H-bonding (see *Water-lattice models*) **127A** (1984) 87
HD–He mixture
- Quantum calculations of rotational and NMR relaxation, depolarized Rayleigh and rotational Raman line shapes for H_2(HD)–He mixtures - Schaefer and Köhler **129A** (1985) 469
Heat bath
- Nonexponential decay in relaxation phenomena and the spectral characteristics of the — Rajagopal and Wiegel **127A** (1984) 218
- Irreversible behavior of a quantum harmonic oscillator coupled to a — - Braun **129A** (1985) 262

Heat bath coupling, quadratic
– Thermal relaxation of systems with quadratic heat bath coupling. I. Classical systems - Lindenberg and Cortés **126A** (1984) 489
Heat conduction (see *Diffusion, thermal*) **123A** (1984) 227
– A thermodynamic approach to heat and electric conduction in solids - Llebot et al. .. **121A** (1983) 552
Heat conduction problem (see *Half-plane barrier*) **122A** (1983) 325
Heat conduction, random (see *Random physical process*) **123A** (1984) 261
^{3}He–^{4}He mixtures (see *Topological defects*) **128A** (1984) 1
Heisenberg alternating antiferromagnetic spin-$\frac{1}{2}$ chain
– A Green function approach to the alternating spin-$\frac{1}{2}$ Heisenberg antiferromagnetic linear chain in a magnetic field - Magnus and Boon **126A** (1984) 177
Heisenberg anisotropic model (see *Linear chain, anisotropic*) **123A** (1984) 279
Heisenberg spin chain (see *Nonlinear difference–difference equations*) **125A** (1984) 344
Heisenberg spin chain, anisotropic (see *Bäcklund transformations*) **123A** (1984) 319
H_2–He mixture
– Quantum calculations of rotational and NMR relaxation, depolarized Rayleigh and rotational Raman line shapes for H_2(HD)–He mixtures – Schaefer and Köhler **129A** (1985) 469
Hidden variables (see *Quenching*) **122A** (1983) 1
High-electric field
– A Langevin equation approach to non-stationary high-field electron transport - Pottier **121A** (1983) 293
Hillert model (see *Crystal kinetics*) **129A** (1985) 601
Hohenberg–Kohn theorem (see *Density-functional formalism*) **121A** (1983) 253
Hole theory of fluids
– Application of the cluster variation method to the — - Shinomoto and Morita **127A** (1984) 141
Hopping (see *Hydrogen diffusion*) **129A** (1984) 184
Hubbard interaction
– Separable interactions and liquid ^{3}He. III. Landau expansion in the presence of a — - Nijhoff et al. **130A** (1985) 375
Hubbard model (see *Phonon mediated electron–electron interactions*) **128A** (1984) 296
– Truncated — - Bariev and Kozhinov **127A** (1984) 316
Hugoniot curve (see *Melting of aluminium*) **128A** (1984) 363
Hydrodynamic fluctuation forces
– On the existence of — - Chan and White **122A** (1983) 505
Hydrodynamic many-body interactions (see *Suspension of spheres*) **128A** (1984) 48
Hydrodynamics (see *Boundary condition, stick*) **122A** (1983) 277
Hydrogen diffusion
– Theory of incoherent — in metals - Kashlev **129A** (1984) 184
Hydrogen, fluid
– Statistical thermodynamics of fluid hydrogen at high energy density - Ebeling **130A** (1985) 587
Hydrogen isotopes
– A survey of experimental data related to the non-spherical interaction for the — and their mixture with notble gases - Hermans et al. **122A** (1983) 173
Hydrogen plasma
– Generalized transport coefficients of an *N*-component fluid application to the — - Bernu **122A** (1983) 129

Impact phenomena
– Random walk model of — - West and Shlesinger **127A** (1984) 490
Incoherent tunnelling (see *Hydrogen diffusion*) **129A** (1984) 184

Incommensurate crystal phase (see *Kronig–Penney model*) **127A** (1984) 125
Incommensurate crystal phases
– Superspace groups and representations of ordinary space groups: alternative approaches to the symmetry of — - Janssen and Janner **126A** (1984) 163
Induced forces (see *Many-sphere hydrodynamic interactions*) **127A** (1984) 451
Induced stress (see *Suspension of spheres*) **126A** (1984) 1
Inelastic collisions (see *Kinetic theory*) **121A** (1983) 150
Inertial corrections in diffusion
– Unified approach to the calculation of — - Steiger **125A** (1984) 1
Infinite classical systems
– Stability and equilibrium of — - Stragier and Vansevenant **128A** (1984) 351
Inhomogeneous alloy
– Kinetics of crystalline configurations - Van Baal **129A** (1985) 601
Inhomogeneous collisionless system (see *Vlasov equation*) **127A** (1984) 473
Inhomogeneous ensemble (see *Quenched inhomogeneous systems*) **123A** (1984) 253
Inhomogeneous fluids
– Thermodynamic properties of — - Boiteux and Kerins **121A** (1983) 399
Integrable systems (see *Non-Hamiltonian systems*) **128A** (1984) 268
Intensity auto-correlation function
– Multiple Rayleigh–Gans–Debye scattering in colloidal systems – dynamic light scattering - Dhont **129A** (1985) 374
Intensity distribution (see *Frequency modulation, microscopic*) **129A** (1985) 455
Interaction range, variable (see *Gaussian column model*) **130A** (1985) 88
Interactions, cooperative
– Motion and capture of quasiparticles in solids in the presence of cooperative trap interactions - Kenkre et al. **128A** (1984) 571
Interface, liquid–vapor
– Structure of the liquid–vapor interface using a Gaussian column model with a variable interaction range - Bedeaux et al. **130A** (1985) 88
Interface
– Invariant formulation of the reflection of long waves by interfaces - Lekner **128A** (1984) 229
Interfaces (see *Inhomogeneous fluids*) **121A** (1983) 399
Interfacial density profile (see *Classical plasma*) **128A** (1984) 631
Intermediate valence compounds
– Intermediate valence impurity with a local boson field. Response to external probes - Zieliński **129A** (1985) 626
Intermolecular potential (see N_2–N_2 *system*) **129A** (1985) 439
Internal motion (see *Inviscid flow*) **125A** (1984) 150
Intra-molecular interaction (see *Magnetic lattice gas*) **126A** (1984) 504
Invariance conditions
– Invariance under conformal coordinate and point transformations - Beckers and Sinzinkayo **126A** (1984) 371
Inviscid flow
– Internal motion of a small element of fluid in an — - Vieillefosse **125A** (1984) 150
Ion mobility (see *Kinetic theory*) **121A** (1983) 150
Ionization equilibrium (see *Plasmas, nonideal*) **127A** (1984) 72
Ionized plasma, partially
– Linear response theory for thermoelectric transport coefficients of a partially ionized plasma - Höhne et al. **128A** (1984) 643
Irreducible algebraic invariants (see *Sixteen vertex model*) **125A** (1984) 58

Irreversibility of Kolmogorov dynamical systems
– Intrinsic — - Courbage **122A** (1983) 459
Irreversible processes on lattices
– Irreversible random and cooperative processes on lattices: direct determination of density expansions - Evans **123A** (1984) 297
Ising chain
– Finite-temperature correlations for the — in a transverse field - Perk et al. **123A** (1984) 1
Ising lattice
– Effect of impurities on the phase transition temperature in a two-dimensional — - Grozdev **127A** (1984) 354
Ising model, anisotropic (see *Multiparameter systems*) **130A** (1985) 171
Ising model, random-bond
– Spin-glass and ferromagnetic phases of the random-bond Ising model on the Bethe lattice - Morita **125A** (1984) 321
Ising model (see *Bond-random Ising model*) **122A** (1983) 483
Ising model (see *Cluster variation method*) **123A** (1984) 595
– — with two-spin interactions and four-spin interactions on the square lattice - Horiguchi **130A** (1985) 194
Ising models (see *Mulicomponent spin models*) **122A** (1983) 313
– Modulated phases in — with diluted frustration - Rijpkema and Knops **122A** (1983) 489
Ising model, three-dimensional
– Equilibrium cluster distribution of the three-dimensional Ising model in the one phase region - Marro and Toral **122A** (1983) 563
– Scaling analysis of the $d=3$ random field Ising model - Jacobs and Nauenberg **128A** (1984) 529
Ising model, transverse
– Localized states and long-range ordering in one-dimensional transverse Ising model - Micnas and Kowalewski **127A** (1984) 422
– Longitudinal relaxation spectra of the transverse Ising model close to T_c - Dumont .. **125A** (1984) 124
– Thermodynamical properties of the transverse Ising model - Sá Barreto and Fittipaldi **129A** (1985) 360
Ising model, two-dimensional
– Partition function zeros for the two-dimensional Ising model - Stephenson and Couzens **129A** (1984) 201
Ising-like lattices
– Nonuniversality in a model Hamiltonian with four-spin interactions - D'Elía **130A** (1985) 220
Isochoric method (see *PVT properties*) **126A** (1984) 384
Isotropic lattice (see *Ising model, two-dimensional*) **129A** (1984) 201
Isotropic rigid heat conductor (see *Extended irreversible thermodynamics*) **128A** (1984) 535

Kac's model (see *Dynamical systems, model*) **122A** (1983) 345
Kadanoff operator algebra (see *Four-spin interactions*) **130A** (1985) 220
Kinetic equation, covariant
– A covariant kinetic equation for a self-gravitating system - Kandrup **126A** (1984) 461
Kinetic equation (see *Ising model, transverse*) **125A** (1984) 124
Kinetic equation (see *Rayleigh gas*) **127A** (1984) 194
– Relation between the kinetic equations in the subdynamics approach and the Boltzmann equation for inhomogeneous gases - Škarka **129A** (1984) 62
Kinetic theory (see *Binary polyatomic–noble gas mixture*) **128A** (1984) 371
Kinetic theory (see *Coarsening of spherical droplets*) **123A** (1984) 386
Kinetic theory (see *Diatomic gas*) **128A** (1984) 178

Kinetic theory (see *Dicke-type model*) **128A** (1984) 82
Kinetic theory (see *Self-diffusion*) **123A** (1984) 549
– Experimental investigation of the viscomagnetic diffusion flux - Breunese et al. **126A** (1984) 66
– Dynamical properties of strongly interacting Brownian particles. III. Binary mixtures - Ohtsuki **122A** (1983) 212
– Gaussian basis functions in —. II. Completely transformed kinetic equation - Weinert **125A** (1984) 497
– On generalized Waldmann–Snider equations - Veguillas et al. **123A** (1984) 463
– On the derivation of dynamical equations for systems with an interface. III. The solid–liquid interface - Ronis **121A** (1983) 1
– Spin systems in contact with thermostat – kinetic model - Piotrowski **121A** (1983) 135
– Gaussian basis functions in — .I. Incorporation of inelastic processes - Weinert **121A** (1983) 150
Kinetic theory, linear
– Linear kinetic theory of hard-sphere fluids - Bławzdziewicz and Cichocki **127A** (1984) 38
Kinetic-theory model (see *Transport properties*) **130A** (1985) 437
Kinetic theory of field effects
– — in nonuniform molecular gases - Mazur et al. **121A** (1983) 430
Kinetic theory, renormalized (see *Self-diffusion*) **123A** (1984) 560
Kinks, interacting
– Statistical dynamics of interacting kinks I - Kawasaki and Nagai **121A** (1983) 175
Kirchhoff–Planck law
– — for freely radiating bodies and fluctuation–dissipation theorem - Eckhardt **128A** (1984) 467
Klein–Kramers equation (see *Boundary layer effect*) **129A** (1985) 514
Klein–Kramers equation
– The covariant form of the — and the associated moment equations - Kneller and Titulaer **129A** (1984) 81
Klimontovich equation (see *Balance laws*) **129A** (1984) 95
Knudsen regime (see *Transition regime*) **130A** (1985) 437
Kolmogorov dynamical systems (see *Irreversibility of Kolmogorov dynamical systems*) ... **122A** (1983) 459
Korteweg–de Vries equation (see *Nonlinear difference–difference equations*) **125A** (1984) 344
Korteweg–de Vries equations (see *Bäcklund transformations*) **123A** (1984) 319
Kramers method, generalized
– Lifetime of metastable states: the mean first passage time and a generalized Kramers method - Ryter **130A** (1985) 205
Kramers model
– Activated tunneling decay of metastable state: solution of the Kramers problem - Mel'nikov **130A** (1985) 606
– The — of chemical relaxation in the presence of a radiation field – Marchesoni and Grigolini **121A** (1983) 269
Kronig–Penney model
– Modulated — in superspace - De Lange and Janssen **127A** (1984) 125
Kronig–Penney potential (see *One-dimensional solids*) **129A** (1984) 151
Krypton–argon mixtures
– Density and dielectric constant of dense argon and krypton mixtures - Vidal et al. ... **127A** (1984) 574
Kubo formalism
– On the generalized linear response functions - Obada et al. **130A** (1985) 292

Ladder approximation (see *Degenerate Fermi systems*) **127A** (1984) 646
Landau criterion (see *Space groups*) **127A** (1984) 677
Landau expansion (see *Mean-field model*) **122A** (1983) 252

– Separable interactions and liquid ^{3}He. III. — in the presence of a Hubbard interaction - Nijhoff et al. ... **130A** (1985) 375
Landau memory kernel (see *Self-diffusion*) ... **123A** (1984) 560
Landau theory (see *Phase transitions*) ... **121A** (1983) 145
Landau-Ginzburg hamiltonian (see *Critical phenomena*) ... **129A** (1985) 535
Landau–Lifshitz method (see *Nonequilibrium fluctuations*) ... **126A** (1984) 443
Langevin equation (see *Brownian motion, two-dimensional*) ... **127A** (1984) 363
Langevin equation (see *Quantum harmonic oscillator*) ... **129A** (1985) 262
Langevin equation (see *Thermal relaxation*) ... **126A** (1984) 489
– A — approach to non-stationary high-field electron transport - Pottier ... **121A** (1983) 293
Langevin equation, generalized (see *Lennard-Jones fluid*) ... **123A** (1984) 516
Langevin equations
– Some remarks on the adiabatic elimination of fast variables from coupled — - Theiss and Titulaer ... **130A** (1985) 143
Langevin formalism
– On the — for nonlinear and nonequilibrium hydrodynamic fluctuations - Morozov ... **126A** (1984) 443
Langevin-type equations, stochastic
– Construction of stationary distribution functions for a system of stochastic Langevin-type equations - Fedchenia ... **123A** (1984) 535
Langrangian formulation (see *Fluid dynamics*) ... **127A** (1984) 265
Lattice animals (see *Finite-size scaling renormalization*) ... **123A** (1984) 428
Lattice dynamics
– A quantum field theory of — at finite temperature - Kitamura ... **128A** (1984) 427
Lattice gas model
– — for monolayer of amphipatic molecules - Pekalski ... **129A** (1984) 225
– Critical behaviour of the — in the Percus–Yevick approximation - Parola and Reatto **125A** (1984) 255
Lattice, NaCl-type
– On the electrostatic potential due to a slab shaped and a semi-infinite NaCl-type lattice - Nijboer ... **125A** (1984) 275
Lattice sums (see *Electric field gradient tensor*) ... **122A** (1983) 263
Lenard–Balescu equation
– Linear response theory of electrical conductivity of a plasma and improvements of the — - Röpke ... **121A** (1983) 92
Lennard-Jones fluid
– On the relative dynamics of pairs of atoms in simple liquids - Posch et al. ... **123A** (1984) 516
Lennard-Jones fluids (see *Liquid–vapour coexistence properties*) ... **126A** (1984) 289
Lifshitz criterion (see *Space groups*) ... **127A** (1984) 677
Light scattering, dynamic
– Multiple Rayleigh–Gans–Debye scattering in colloidal systems - dynamic light scattering - Dhont ... **129A** (1985) 374
Linear chain (see *Ising model, transverse*) ... **127A** (1984) 422
Linear chain, anisotropic
– Spectral density approach for the damping of fermion elementary excitations in an anisotropic spin-$\frac{1}{2}$ linear chain - Campana et al. ... **123A** (1984) 279
Linear confining potential model (see *Summation of perturbation series*) ... **128A** (1984) 589
Linear integral equations
– — and nonlinear difference–difference equations - Quispel et al. ... **125A** (1984) 344
Linear longitudinal acoustic waves
– On the propagation of — in isotropic media with shear and volume viscosity and a tensorial internal variable. I. General formalism - Ciancio et al. ... **125A** (1984) 640

Linear molecules (see *Flow birefringence*) **130A** (1985) 465
Linear molecules (see *Flow birefringence*) **130A** (1985) 505
Linear response
– On the generalized — functions - Obada et al. **130A** (1985) 292
Linear response functions (see *Superfluid Fermi-liquids*) **127A** (1984) 323
Linear response theory
– — for thermoelectric transport coefficients of a partially ionized plasma - Höhne et al. **128A** (1984) 643
– — of electrical conductivity of a plasma and improvements of the Lenard–Balescu equation - Röpke **121A** (1983) 92
– The dipole–dipole dispersion forces between spherical atoms from the Callen–Welton — - Battezzati **125A** (1984) 591
Line-broadening (see *Vibrotor interaction potential*) **129A** (1985) 469
Liquid condensed–liquid extended transistion (see *Lattice gas model*) **129A** (1984) 225
Liquid crystals (see *Phase transitions, isotrophic–nematic*) **121A** (1983) 513
– An anti-nematic phase of — - Sokalski and Ruijgrok **126A** (1984) 280
– Molecular foundation of a unified theory for the isotropic and nematic or cholesteric phases of — - Pardowitz and Hess **121A** (1983) 107
Liquid phase, isotropic (see *Liquid crystals*) **121A** (1983) 107
Liquid–gas mixtures (see *Two-phase bubbly flow*) **129A** (1985) 233
Liquid–vapour coexistence properties
– The liquid–vapour coexistence line for Lennard-Jones-type fluids - Powles **126A** (1984) 289
Local gas velocity (see *Random fluctuations on the behaviour of an aerosol*) **125A** (1984) 105
Local interactions (see *Dynamical systems, model*) **122A** (1983) 345
Localized states (see *Ising model, transverse*) **127A** (1984) 422
London regime (see *Superfluid Fermi-liquids*) **127A** (1984) 323
Long-range ordering (see *Ising model, transverse*) **127A** (1984) 422
Long-time tail coefficient (see *Quantum Lorentz gas*) **125A** (1984) 163
Long-wave fluctuations (see *Fluctuation effects*) **126A** (1984) 135
Lorentz gas
– Decay of correlations in the — - Alder and Alley **121A** (1983) 523
– Exact and approximate generalized diffusion equation for the — - Paszkiewicz **123A** (1984) 161
Lotka–Volterra equations (see *Non-Hamiltonian systems*) **128A** (1984) 268

Macroscopic description (see *Birth and death processes*) **128A** (1984) 377
Magnetic field effect on transport properties (see *Hydrogen isotopes*) **122A** (1983) 173
Magnetic field effect (see *N_2–noble gas mixtures*) **123A** (1984) 412
Magnetic field effects
– — in the dynamics of alternating or anisotropic quantum spin chains - Taylor and Müller **130A** (1985) 1
Magnetic lattice gas
– — of molecules with internal structure - Dudek and Pekalski **126A** (1984) 504
Magnetic superconductors (see *Meissner effect*) **126A** (1984) 520
Magnetization (see *Heisenberg alternating antiferromagnetic spin-$\frac{1}{2}$ chain*) **126A** (1984) 177
Magnetization (see *Ising model, transverse*) **129A** (1985) 360
Magnetization switching
– Kinetics of — in a 1-D system II – long time behavior of switched domains - Sekimoto **128A** (1984) 132
Magnetization switching in a 1-D system
– Kinetics of — – size distribution of unswitched domains - Sekimoto **125A** (1984) 261

Magnetized plasma (see *Self-diffusion*) **123A** (1984) 549
Magnetized plasma, dense (see *Self-diffusion*)..... **123A** (1984) 560
Magnetized plasma, dense (see *Self-diffusion*)..... **126A** (1984) 308
Many-body hydrodynamic interactions (see *Diffusion coefficient*)..... **126A** (1984) 349
Many-component fluid (see *Hydrogen plasma*) **122A** (1983) 129
Many-particle system (see *Linear response theory*) **121A** (1983) 92
Many-sphere hydrodynamic interactions
– — . III. The influence of a plane wall - Beenakker et al. **127A** (1984) 451
Mapping, one-dimensional
– Devil's staircase in a one-dimensional mapping - Horiguchi and Morita **126A** (1984) 328
Mapping, piecewise linear (see *Devil's staircase*)..... **128A** (1984) 289
Markov processes (seee *Irreversibility of Kolmogorov dynamical systems*) **122A** (1983) 459
Markovian approximation (see *Second-order response*)..... **125A** (1984) 619
Mass action law (see *Plasma, partially ionized*)..... **130A** (1985) 523
Master equation (see *Schlögl model*)..... **128A** (1984) 150
Master equation formalism (see *Bistable chemical reaction*) **123A** (1984) 109
Master equation, inhomogeneous (see *Boltzmann equations, quantum*) **121A** (1983) 617
Mathieu potential (see *One-dimensional solids*)..... **129A** (1984) 151
Matrix solvent (see *Second-order response*)..... **122A** (1983) 375
Mean-field approach (see *Quantum Ising-like spin-j model*)..... **129A** (1984) 165
Mean-field approximation (see *Order–disorder transitions*)..... **128A** (1984) 318
Mean-field description, exact (see *Quantum systems in equilibrium*)..... **121A** (1983) 59
Mean-field model (see *Exactly solvable models*) **122A** (1983) 231
– On the mean-field theory of metal–insulator phase transition in doped systems: critical and tricritical asymptotic behaviour - Brankov and Tonchev..... **3122A** (983) 252
Mean-field renormalization group
– — analysis of the Blume–Capel model - De Alcantara Bonfim..... **130A** (1985) 367
Mean-field theory (see *Metal–insulator phase transition*)..... **129A** (1985) 423
Mean-field theory (see *Potts model, quantum*)..... **125A** (1984) 247
Mean-field treatment (see *Ising model, transverse*) **129A** (1985) 360
Mean first passage time
– Lifetime of metastable states: the — and a generalized Kramers method - Ryter..... **130A** (1985) 205
Meissner effect
– Self-consistent microscopix approach of the — in magnetic superconductors - Turcu and Aldea **126A** (1984) 520
Melting curve
– Sodium — calculation. I. Variational approach limitations - Angelie and Pelissier... **121A** (1983) 207
– Sodium — calculation. II. A successful perturbation approach - Pelissier..... **121A** (1983) 217
Melting curve of lead
– Calculation of the — - Pélissier..... **126A** (1984) 271
Melting curve of Na, K, Rb and Cs
– High pressure of the — - Pélissier..... **126A** (1984) 474
Melting of aluminium
– —: a model potential approach up to 2 megabars - Pélissier **128A** (1984) 363
Melting transition
– Melting and wetting transitions in the three-state chiral clock model - Huse et al..... **121A** (1983) 363
Membrane–particle coupling
– Exact classical and quantum mechanics of a particle coupled to a membrane - Dekker..... **129A** (1985) 503
Memory functions (see *Second-order response*)..... **125A** (1984) 619

Metal–insulator phase transition
– On the mean-field theory of the — - Brankov and Pesheva **129A** (1985) 423
Metal–insulator transition (see *Phase transitions*)..... **122A** (1983) 231
– On the mean-field theory of metal–insulator phase transition in doped systems: critical and tricritical asymptotic behaviour - Brankov and Tonchev..... **122A** (1983) 252
Metallic glasses (see *Two-level system*) **128A** (1984) 541
Metamagnets (see *Topological defects*) **128A** (1984) 1
Metastability (see *Schlögl model*) **128A** (1984) 150
Metastable state
– Activated tunneling decay of — solution of the Kramers problem - Mel'nikov **130A** (1985) 606
– Lifetime of —s: the mean first passage time and a generalized Kramers method - Ryter **130A** (1985) 205
Metastable states (see *Spin-one system*)..... **122A** (1983) 1
Metric space (see *Wigner's theorem*) **127A** (1984) 599
Metrics in classical thermodynamics
– On equivalence of two — - Mrugała **125A** (1984) 631
Migdal approximation
– Bond-moving transformations for continuous-spin systems - Sokalski and Ruijgrok. **130A** (1985) 412
Minkowski space
– Twistor space, — and the conformal group - Van den Broek **122A** (1983) 587
Mobility (see *Oseen drag*) **123A** (1984) 191
Model potential (see *Melting curve of lead*)..... **126A** (1984) 271
Model potential (see *Melting curve of Na, K, Rb and Cs*) **126A** (1984) 474
Model potential (see *Melting of aluminium*)..... **128A** (1984) 363
Model potential (see *Variational approach*)..... **121A** (1983) 207
Modulated ionic crystals
– Electric field gradient tensor in — - Van Beest and Janner **122A** (1983) 263
Modulated phases (see *Ising models*)..... **122A** (1983) 489
Molecular density matrix (see *Diatomic gas*)..... **128A** (1984) 178
Molecular dynamics (see *Lorentz gas*) **121A** (1983) 523
– Self-diffusion in a dense hard-sphere fluid: a — simulation - Easteal et al. **121A** (1983) 286
Molecular dynamics simulations
– On the number dependence of hard-spheres diffusion coefficients from — - Easteal et al..... **127A** (1984) 344
Molecular-field approximation (see *Lattice gas model*) **129A** (1984) 225
Molecule, specific model
– Radiationless transitions: when can a molecule serve as its own thermal bath? - Fain **122A** (1983) 363
Moment equations
– The covariant form of the Klein–Kramers equation and the associated — - Kneller and Titulaer **129A** (1984) 81
Momentum fluctuations (see *Membrane–particle coupling*)..... **129A** (1985) 503
Monolayer (see *Amphipatic molecules*) **129A** (1985) 225
Monopole scatters (see *Array of scatterers, disordered*)..... **129A** (1985) 562
Multicomponent spin models
– Correlated site-bond percolation for — - Moraal **122A** (1983) 313
Multicomponent systems
– Generalized cluster description of — - Sanchez et al. **128A** (1984) 334
Multi-degree-of-freedom system (see *Finite correlation time effects*) **128A** (1984) 25
Multidimensional lattice (see *Random walk, biased*)..... **127A** (1984) 659
Multiparameter systems

– Phenomenological renormalization of — - Barber **130A** (1985) 171
Multiple scattering
– Investigation of — contributions to the depolarization of light scattered by carbon dioxide and xenon in the critical region. III. Comparison between theory and experimental results - Trappeniers et al. **126A** (1984) 116
Multipole–multipole interactions
– Quantum Ising-like spin-j model with — : second order mean-field approach - Buzano and Rasetti **129A** (1984) 165
Multistability (see *Noise-induced phase transitions*) **125A** (1984) 577
Mutual pair motion
– On the relative dynamics of pairs of atoms in simple liquids - Posch et al. **123A** (1984) 516

N_2–CO (see *Thermal conductivity*) **123A** (1984) 50
Nearest neighbour interactions (see *Order–disorder transition*) **129A** (1984) 17
Nematic phase, ordered (see *Liquid crystals*) **121A** (1983) 107
Nematic to smectic A phase transition
– Critical properties of the modified Ginzburg–Landau model for the — - Rościszewski **125A** (1984) 412
Neutrino gas, massive
– The volume viscosity of a degenerate massive neutrino system - De Groot and Calkoen **127A** (1984) 627
N_2–N_2 system
– A classical dynamics study of Senftleben–Beenakker effects in nitrogen gas - Turfa et al **129A** (1985) 439
N_2–noble gas mixtures
– Experiments on the influence of a magnetic field on diffusion in — - Mazur et al. **123A** (1984) 412
Noble gas mixtures (see *Viscomagnetc effect*) **126A** (1984) 82
Noble gas–hydrogen mixtures (see *Hydrogen isotopes*) **122A** (1983) 173
N_2O–CO_2 (see *Thermal conductivity*) **123A** (1984) 50
Noise-induced phase transitions
– Boundary stochastic problems, multistability in the presence of fluctuations and — - Fedchenia **125A** (1984) 577
Non-axial molecular fluids
– Perturbation theory for — - Singh et al. **121A** (1983) 563
Nonequilibrium chemical systems
– Chiral-symmetry-breaking states and their sensitivity in — Kondepudi and Nelson .. **125A** (1984) 465
Nonequilibrium fluctuations
– On the Langevin formalism for nonlinear and non-equilibrium hydrodynamic fluctuations - Morozov **126A** (1984) 443
Nonequilibrium phase transitions (see *Finite correlation time effects*) **123A** (1984) 99
Nonequilibrium statistical mechanics
– Initial conditions in —. I. The generation of solitary waves from discontinuities - Muriel **129A** (1985) 577
Nonequilibrium steady states (see *Fluctuation–dissipation theorems*) **123A** (1984) 609
Nonexponential decay (see *Relaxation phenomena*) **127A** (1984) 218
Non-Hamiltonian systems
– On the complete and partial integrability of — - Bountis et al. **128A** (1984) 268
Nonintersecting string model
– Diagonalization of the transfer matrix of a — - Perk and Schultz **122A** (1983) 50
Nonlinear anharmonic oscillator (see *Boundary stochastic problems*) **125A** (1984) 577
Nonlinear difference–difference equations

– Linear integral equations and — - Quispel et al. **125A** (1984) 344
Nonlinear relaxation
– The *p–q* model Boltzmann equation – Futcher and Hoare **122A** (1983) 516
Nonlinear Schrödinger equation (see *Nonlinear difference–difference equations*)..... **125A** (1984) 344
Nonlinear transport equations (see *Kinetic theory*) **121A** (1983) 150
Non-local interactions (see *Birth and death processes*) **128A** (1984) 377
Non-spherical interactions
– A survey of experimental data related to the — for the hydrogen isotopes and their mixture with noble gases - Hermans et al **122A** (1983) 173
Nonspherically symmetric perturbations (see *Aggregation by diffusion*)..... **123A** (1984) 360
Nonuniform molecular gases
– Kinetic theory of field effects in — - Mazur et al. **121A** (1983) 430
Nuclear magnetic relaxation (see *Hydrogen isotopes*)..... **122A** (1983) 173
Nuclear magnetic relaxation (see *Stochastic rotation operator*) **128A** (1984) 611
– Theory of — by anisotropic chemical shift - McConnell..... **127A** (1984) 152
– The limit diffusion mechanism of relaxation for spin systems - Papiez..... **122A** (1983) 413
Number fluctuation model
– A — generating $1/f$ pattern - Grüneis **123A** (1984) 149
n-vector Bose system (see *Random field effects*) **126A** (1984) 195

One-dimensional bcc lattice
– Theory of incoherent hydrogen diffusion in metals - Kashlev **129A** (1984) 184
One-dimensional mapping (see *Exactly solvable models*) **130A** (1985) 597
One-dimensional non-linear systems
– The continuum limit of one-dimensional non-linear models - Rossi and Brihaye **126A** (1984) 237
One-dimensional solids
– Comparison of nearly free electron and tight binding limits in — - Wille et al **129A** (1984) 151
$1/f$ noise
– A number fluctuation model generating $1/f$ pattern - Grüneis..... **123A** (1984) 149
One-phase region (see *Equilibrium cluster distribution*) **122A** (1983) 563
One-sphere problem
– Isotropic elastic medium containing a spherical particle. I. Incompressible media - Jones and Schmitz **122A** (1983) 105
– Isotropic elastic medium containing a spherical particle. II. Compressible media - Jones and Schmitz **122A** (1983) 114
Onsager relations (see *Diffusion, thermal*) **123A** (1984) 227
Onsager reciprocal relations, surface
– Fluctuations in finite systems: time reversal symmetry, surface Onsager reciprocal relations and fluctuating hydrodynamics - Satten and Ronis **125A** (1984) 281
Onsager symmetry (see *Electrohydrodynamics*) **122A** (1983) 383
Onsager symmetries
– — in field-dependent flows of rarefied molecular gases - Ten Bosch et al..... **123A** (1984) 443
Onsager's formalism (see *Phase transitions, isotropic–nematic*) **121A** (1983) 513
Optical isomers (see *Stereoisomers, gaseous*)..... **123A** (1984) 586
Optical potential
– — of a disordered array of scatterers - Felderhof and Mattern..... **128A** (1984) 404
Order–disorder transition
– Ordering in binary fcc alloys - Bell and Oitmaa..... **129A** (1984) 17
Order–disorder transitions
– — for a two-dimensional lattice of reorientable quadrupoles in the mean-field appro-

ximation - Massidda and Hernando **128A** (1984) 318
Ordinary differential equations (see *Non-Hamiltonian systems*) **128A** (1984) 268
Oseen drag
– The — on a circular cylinder revisited - Weisenborn and Mazur **123A** (1984) 191
– The — on a sphere and the method of induced forces - Mazur and Weisenborn **123A** (1984) 209

Pade approximants (see *Hydrogen, fluid*) **130A** (1985) 587
Painlevé property (see *Non-Hamiltonian systems*) **128A** (1984) 268
Pair correlation (see *Gaussian column model*) **130A** (1985) 88
Pair-correlation function (see *bcc-structure*) **127A** (1984) 509
Pair distribution (see *Electrolytes*) **122A** (1983) 441
Para hydrogen–noble gas mixtures
– Flow birefringence in binary — - Van Houten et al. **130A** (1985) 490
Parameter space, 16-dimensional (see *Sixteen vertex model*) **121A** (1983) 479
Parameter space, 16-dimensional (see *Sixteen vertex model*) **125A** (1984) 25
Para-orthogonal group (see *Sixteen vertex model*) **125A** (1984) 442
Particle–hole excitations (see *Quantum field theory*) **128A** (1984) 427
Particles, identical
– Quantum Boltzmann equations for binary interactions between identical particles - Vasilopoulos and Van Vliet **121A** (1983) 617
Partition function zeros
– —for the two-dimensional Ising model - Stephenson and Couzens **129A** (1984) 201
Path integral (see *Fokker–Planck equation*) **125A** (1984) 607
– — approach to quantum Borwnian motion - Caldeira and Leggett **121A** (1983) 587
– Numerical estimation of the — , and the diffusion in an anharmonic oscillator - Morita and Hara **127A** (1984) 113
Path integral formalism (see *Diffusion*) **127A** (1984) 173
Path probability method (see *Diffusion, thermal*) **123A** (1984) 227
Percolation problems (see *Potts model, antiferromagnetic*) **123A** (1984) 175
Percus–Yevick approximation
– Critical behaviour of the lattice gas model in the — - Parola and Reatto **125A** (1984) 255
Percus–Yevick equation
– Exact solution of the — for a hard-core fluid in odd dimensions - Leutheusser. **127A** (1984) 667
Periodic orbits (see *Mapping, one-dimensional*) **126A** (1984) 328
Perturbation approach
– Sodium melting curve calculation. II. A successful — - Pelissier. **121A** (1983) 217
Perturbation theory (see *Condensate, dynamics of*) **121A** (1983) 315
Perturbation theory (see *Kubo formalism*) **130A** (1985) 292
Perturbation theory (see *Summation of divergent perturbation series*) **128A** (1984) 253
Perturbation theory (see *Summation of perturbation series*) **128A** (1984) 589
– — for non-axial molecular fluids - Singh et al. **121A** (1983) 563
Phase diagram (see *Blume–Capel model*) **130A** (1985) 367
Phase diagram (see *Chiral clock model*) **127A** (1984) 1
Phase diagram (see *Continuous-spin systems*) **130A** (1985) 412
Phase diagram (see *Decorated Ising model*) **127A** (1984) 587
Phase diagram (see *Fisher's alternate-site lattice gas model*) **126A** (1984) 25
Phase diagram (see *Water-lattice models*) **127A** (1984) 87
Phase separation (see *Dynamic-scaling theory*) **123A** (1984) 497
– Long term behavior of —; computations with the non-homogeneous, time dependent

cluster variation method - Bodegom and Meijer **122A** (1983) 13
Phase transition (see *Ising model*) **130A** (1985) 194
Phase transition (see *Thermodynamic limit*) **130A** (1985) 323
Phase transition temperature
– Effect of impurities on the — in a two-dimensional Ising lattice - Grozdev **127A** (1984) 354
Phase transitions (see *Bond-random Ising model*) **122A** (1983) 483
Phase transitions (see *Lattice gas model*) **129A** (1984) 225
Phase transitions (see *Liquid crystals*) **126A** (1984) 280
Phase transitions (see *Magnetic lattice gas*) **126A** (1984) 504
Phase transitions (see *Multicomponent spin models*) **122A** (1983) 313
– On — with bilinearly coupled order parameters - Oleksy and Przystawa **121A** (1983) 145
– On the metal–insulator — in two exactly solvable models - Brankov and Pesheva ... **122A** (1983) 231
Phase transitions, isotropic–nematic
– Isotropic–nematic phase transition in a system of slightly flexible long thin rods - Ohtsuki **121A** (1983) 513
Phase transitions, nonequilibrium (see *Finite correlation time effects*) **128A** (1984) 25
Phenomenological renormalization
– — of multi-parameter systems - Barber **130A** (1985) 171
Phonon mediated electron–electron interactions
– On the — - Zieliński **128A** (1984) 296
Phonon spectrum calculation (see *Perturbation approach*) **121A** (1983) 217
Phonons, non-equilibrium (see *Radiationless transitions*) **128A** (1984) 164
Photophoresis
– On the implications of surface reciprocal relations for thermophoresis and — - Satten and Ronis **125A** (1984) 302
Π̂-subdynamics (see *Waldmann–Snider equations*) **128A** (1984) 447
Pitchfork bifurcation (see *Potts model, q-state random*) **128A** (1984) 207
Plasma–electromagnetic field interaction (see *Relativistic plasma theory*) **128A** (1984) 509
Plasma modes (see *Relativistic quantum plasma*) **127A** (1984) 388
Plasma, partially ionized
– Quantum statistical approach to the equation of state and the critical point of cesium plasma - Redmer and Röpke **130A** (1985) 523
Plasma, relativistic Boltzmann theory for a
– Relativistic Boltzmann theory for a plasma. X. Electrical conduction of the cosmological fluid - Van Erkelens and Van Leeuwen **123A** (1984) 72
Plasmas, nonideal
– Equation of state and ionization equilibrium for nonideal plasmas - Kremp et al. **127A** (1984) 72
Plasmon (see *Two-dimensional electron gas*) **127A** (1984) 529
Poincaré invariance (see *Relativistic plasma theory*) **128A** (1984) 509
Poisson bracket relations (see *Relativistic plasma theory*) **128A** (1984) 509
Poisson process, doubly stochastic (see *1/f noise*) **123A** (1984) 149
Polar fluid
– The dielectric constant of dipolar discs - Morriss and Perram **129A** (1985) 395
Polarizability
– On the generalized linear response functions - Obada et al. **130A** (1985) 292
Polarization (see *N_2–noble gas mixtures*) **123A** (1984) 412
– Flow birefringence in gases at room temperature: new absolute values - Van Houten and Beenakker **130A** (1985) 465
Polarization creep tensor
– Computation of the — - Cercignani et al. **121A** (1983) 531

Polarization diffusion
– — and dielectric friction - Van der Zwan and Hynes **121A** (1983) 227
Polarization flux
– Computation of the polarization creep tensor - Cercignani et al. **121A** (1983) 531
Polyatomic gas (see *Polarization flux*) **121A** (1983) 531
Polyatomic gases
– Theory of field effects on transport properties of — in the transition regime - Mason and Mazur **130A** (1985) 437
Polymer entanglement probabilities (see *Green's function*) **122A** (1983) 325
Potential field (see *Diffusion*) **127A** (1984) 173
Potts model
– Recursion relations for the q-state — on a closed Cayley tree - De'Bell et al. **125A** (1984) 625
Potts model, antiferromagnetic
– Some AB-percolation problems in the antiferromagnetic Potts model - Peruggi et al. **123A** (1984) 175
Potts model, q-state random
– Square-lattice random Potts model: criticality and pitchfork bifurcation - Costa and Tsallis. **128A** (1984) 207
Potts model, quantum
– Many-component limit of the quantum Potts model - Pearce **125A** (1984) 247
Potts model, triangular
– Self-dual transfer matrix renormalization for the triangular Potts model - Kim **123A** (1984) 577
Potts models (see *Multicomponent spin models*) **122A** (1983) 313
Projection operator formalism
– Approach to — for second-order response - Sauermann and Karmann **122A** (1983) 375
PVT properties
– — of sulfur-hexafluoride in the gas–liquid critical region - Biswas et al. **126A** (1984) 384

q-state Potts model
– Recursion relations for the — on a closed Cayley tree - De'Bell et al. **125A** (1984) 625
Quadrupolar matrix (see *Spin–lattice relaxation*) **129A** (1985) 302
Quadrupoles, reorientable
– Order–disorder transitions for a two-dimensional lattice of reorientable quadrupoles in the mean-field approximation - Massidda and Hernando **128A** (1984) 318
Quantum beats (see *Two-photon resonance fluorescence*) **121A** (1983) 309
Quantum crossover (see *X–Y model*) **127A** (1984) 613
Quantum damped harmonic oscillator
– The RPA description of the — - Yannouleas **125A** (1984) 549
Quantum damped oscillator
– — in a magnetic field - Dodonov and Manko **130A** (1985) 353
Quantum dilute gas (see *Waldmann–Snider equations*) **128A** (1984) 447
Quantum field theory
– A — of lattice dynamics at finite temperature - Kitamura **128A** (1984) 427
Quantum field theory of crystals
– A — near melting temperature - Kitamura and Umezawa **121A** (1983) 38
Quantum harmonic oscillator
– Irreversible behavior of a — coupled to a heat bath - Braun **129A** (1985) 262
Quantum inverse scattering method (see *Hubbard model*) **127A** (1984) 316
Quantum inverse scattering (see *Star-triangle equations*) **122A** (1983) 71
Quantum Ising-like spin-j model
– — with multipole–multipole interactions: second order mean-field approach - Buza-

no and Rasetti **129A** (1984) 165
Quantum kinetic equations
– Gauge independent Wigner function approach to spontaneous emission and to — - Badziag **130A** (1985) 565
Quantum Lorentz gas
– Long-time tails in a — - Hoogeveen and Tjon **125A** (1984) 163
Quantum spin chains
– Magnetic field effects in the dynamics of alternating or anisotropic — - Taylor and Müller **130A** (1985) 1
Quantum systems in equilibrium
– On the exact mean-field description of continuous quantum systems in equilibrium II - Maćkowiak **121A** (1983) 59
Quantum systems in thermodynamical equilibrium
– Use of temperature-Green functions for calculation of second-order susceptibilites - Collet **121A** (1983) 85
Quantum transport equation (see *Neutrino gas, massive*) **127A** (1984) 627
Quasiparticles in solids
– Motion and capture cf — in the presence of cooperative trap interactions - Kenkre et al. **128A** (1984) 571
Quenched inhomogeneous systems
– Statistical mechanics of — with random disorder - Sobotta **123A** (1984) 253
Quenching
– A model for — via hidden variables; non-equilibrium behaviour of a system with two long range order parameters - Keskin and Meijer **122A** (1983) 1

Radiationless transitions (see *Molecule, specific model*) **122A** (1983) 363
– Non-equilibrium phonons in nonradiative rate processes - Fain and Lin **128A** (1984) 164
Radiative excitation (see *Chemical relaxation*) **121A** (1983) 269
Radiative heat transfer (see *Kirchhoff–Planck law*) **128A** (1984) 467
Raman light scattering, depolarized (see *Hydrogen isotopes*) **122A** (1983) 173
Raman light scattering, rotational (see *Vibrotor interaction potential*) **129A** (1985) 469
Random channel
– A random walk on a — with absorbing barriers - Huckaby and Hubbard **122A** (1983) 602
Random field effects
– — in a Bose system: critical behaviour and crossover phenomena in the Hartree limit - Busiello et al. **126A** (1984) 195
– — in classical and quantum critical phenomena - Uzunov et al. **129A** (1985) 535
Random fields, quenched (see *Critical phenomena*) **129A** (1985) 535
Random fluctuations on the behaviour of an aerosol
– The influence of — - Williams **125A** (1984) 105
Random functions (see *Kinetic equation, covariant*) **126A** (1984) 461
Random magnetic field (see *Ising model, three-dimensional*) **128A** (1984) 529
Random medium
– Effective elasticity of a solid suspension of spheres. I. Stress–strain constitutive relation - Jones and Schmitz **125A** (1984) 381
Random one-dimensional systems
– Exact solutions for one-particle Green's functions in — - Nieuwenhuizen **125A** (1984) 197
Random physical process
– Characteristic functionals of randomly excited physical systems - Kotulski and Sobczyk **123A** (1984) 261

Random potential, two-valued
– An exactly soluble relaxation problem - Sibani and Van Kampen **122A** (1983) 397
Random relaxation models (see *Random one-dimensional systems*) **125A** (1984) 197
Random walk
– — on the homogeneous spaces of a group and generalized coherent states - Bertotti and Rasetti **129A** (1984) 125
– A — on a random channel with absorbing barriers - Huckaby and Hubbard **122A** (1983) 602
– Asymptotic expansions for a remarkable class of —s - Boersma and Wiegel **122A** (1983) 334
Random walk, biased
– Biased random walk on a multidimensional lattice with absorbing boundaries - Prasad and Unnikrishnan **127A** (1984) 659
Random walk model (see *Impact phenomena*) **127A** (1984) 490
Random walk, plane
– Distribution of the angle of rotation for plane random walks - Wiegel **129A** (1984) 211
Rarefied gas mixture (see *Viscomagnetic diffusion flux*) **126A** (1984) 66
Rarefied gas mixture (see *Viscomagnetic diffusion*) **126A** (1984) 46
Rarefied molecular gases
– Onsager symmetries in field-dependent flows of — - Ten Bosch et al. **123A** (1984) 443
Rate coefficient (see *Diffusion controlled reactions*) **130A** (1985) 34
Rate equations, macroscopic (see *Crystal kinetics*) **129A** (1985) 601
Rayleigh–Gans–Debye scattering
– Multiple — in colloidal systems - dynamic light scattering - Dhont **129A** (1985) 374
Rayleigh gas
– On the velocity relaxation of a —. II. An investigation on reliability and accuracy of the usual kinetic equation - Ferrari **127A** (1984) 194
Rayleigh light scattering, depolarized (see *Vibrotor interaction potential*) **129A** (1985) 469
Rayleigh light-scattering, depolarized (see *Hydrogen isotopes*) **122A** (1983) 173
Rayleigh line broadening (see *Flow birefringence*) **130A** (1985) 490
– A comparison of data on the viscomagnetic effect, flow birefringence and depolarized — - Mazur et al. **130A** (1985) 505
Rayleigh peak structure (see *Steady states*) **130A** (1985) 616
Reaction field (see *Dielectric friction*) **121A** (1983) 227
Reaction field (see *Dielectric properties*) **125A** (1984) 270
Reaction rate coefficient (see *Diffusion-controlled reactions*) **129A** (1985) 514
Recoil effect (see *Single-mode laser*) **125A** (1984) 519
Recursion relations (see *q-state Potts model*) **125A** (1984) 625
Reduced model theory (see *Kramers model*) **121A** (1983) 269
Reflectance (see *Thin film on a rough surface*) **125A** (1984) 75
Reflection amplitude
– Invariant formulation of the reflection of long waves by interfaces - Lekner **128A** (1984) 229
Relativistic Boltzmann theory for a plasma
– —. X. Electrical conduction of the cosmological fluid - Van Erkelens and Van Leeuwen **123A** (1984) 72
Relativistic corrections (see *Vlasov plasma*) **127A** (1984) 549
Relativistic plasma theory
– Gauge-independent canonical formulation of — - Bialynicki-Birula et al. **128A** (1984) 509
Relativistic plasmas, classical dilute
– Self-oscillations in classical dilute relativistic plasmas - Barcons **123A** (1984) 617
Relativistic quantum plasma
– Normal modes of a — ; the one-component plasma - Van Weert et al. **127A** (1984) 388

Relativistic quantum plasma
– Friedel oscillations in a — - Sivak **129A** (1985) 408
Relativistic thermomechanics
– Transformation properties in nonequilibrium- — as compared with those in a field theory - Berezin **127A** (1984) 282
Relaxation cross sections (see *Vibrotor interaction potential*) **129A** (1985) 469
Relaxation function, longitudinal (see *Ising model, transverse*) **125A** (1984) 124
Relaxation phenomena
– Nonexponential decay in — and the spectral characteristics of the heat bath - Rajagopal and Wiegel **127A** (1984) 218
Relaxation problem, exactly soluble
– An exactly soluble relaxation problem - Sibani and Van Kampen **122A** (1983) 397
Relaxation process (see *Radiationless transitions*) **128A** (1984) 164
Relaxation time (see *Nuclear magnetic relaxation*) **127A** (1984) 152
Renormalization group (see *Potts model, q-state random*) **128A** (1984) 207
– Critical properties of the modified Ginzburg–Landau model for the nematic to smectic A phase transition - Rościszewski **125A** (1984) 412
Renormalization-group analysis (see *Random field effects*) **129A** (1985) 535
Renormalization-group method (see *X–Y model*) **127A** (1984) 613
Renormalization transformation
– Renormalization of the gas–liquid transition. I. The flow equations - Van Dieren and Van Leeuwen **128A** (1984) 383
Renormalized transport equations (see Duffing oscillator) **123A** (1984) 481
Resistance matrix (see *Electrohydrodynamics*) **122A** (1983) 383
Response function (see *Frequency modulation, microscopic*) **129A** (1985) 455
Rikitake dynamo model (see *Non-Hamiltonian systems*) **128A** (1984) 268
Rostoker memory kernel (see *Self-diffusion*) **126A** (1984) 308
Rotating wave approximation (see *Quantum harmonic oscillator*) **129A** (1985) 262
Rotational relaxation rate (see *Binary polyatomic–noble gas mixture*) **128A** (1984) 371
RPA dynamics
– The RPA description of the quantum damped harmonic oscillator - Yannouleas **125A** (1984) 549

Scalar wave propagation
– Contributions to the self-energy of a wave propagating in a disordered array - Mattern and Felderhof **129A** (1985) 550
– Wave propagation in a disordered array of monopole scatterers - Mattern and Felderhof **129A** (1985) 562
Scalar waves (see *Disordered array of scatterers*) **128A** (1984) 404
Scaling behaviour (see *Equilibrium cluster distribution*) **122A** (1983) 563
Scaling fields (see *Critical behavior*) **130A** (1985) 171
Scaling properties of autocorrelation functions (see *Dynamic-scaling theory*) **123A** (1984) 497
Scaling theory
– Decay of unstable states: examiniation of the — - Zheng **122A** (1983) 431
Scattering cross-section (see *Thomas–Fermi equation*) **129A** (1985) 591
Scattering function (see *Correlation length*) **128A** (1984) 99
Scattering function (see *Diffusion species*) **122A** (1983) 547
Scattering models
– The *p–q* model Boltzmann equation - Futcher and Hoare **122A** (1983) 516
Scattering problem (see *One-sphere problem*) **122A** (1983) 105
Scattering problem (see *One-sphere problem*) **122A** (1983) 114

Scattering quantities (see *Degenerate Fermi systems*) **127A** (1984) 646
Schlögl model
– Solution of the master equation of a bistable reaction system - Wissel **128A** (1984) 150
Schrödinger equation, nonlinear (see *Bäcklund transformations*) **123A** (1984) 319
Screening, long-range (see *Relativistic quantum plasma*) **129A** (1985) 408
Screening, static (see *Relativistic quantum plasma*) **129A** (1985) 408
Second-order response
– Approach to projection operator formalism for — - Sauermann and Karmann **122A** (1983) 375
Second-order response
– Markovian-type approximation for — - Karmann **125A** (1984) 619
Self-avoiding random walks (see *Finite-size scaling renormalization*) **123A** (1984) 428
Self-consistent field approximation (see *Quantum kinetic equations*) **130A** (1985) 565
Self-consistent harmonic approximation (see *Two-dimensional planar model*) **129A** (1984) 40
Self-diffusion (see *Brownian particles, strongly interacting*) **122A** (1983) 212
Self-diffusion (see *Hard-sphere fluid*) **121A** (1983) 286
– — for a weakly-coupled plasma in a magnetic field - Cohen and Suttorp **123A** (1984) 549
– — in a dense magnetized plasma - Suttorp and Cohen **123A** (1984) 560
– The effect of dynamical screening on — in a dense magnetized plasma - Cohen and Suttorp **126A** (1984) 308
Self-diffusion coefficient (see *Diffusion coefficient*) **121A** (1983) 329
– Diffusion in hard sphere suspensions - Felderhof and Jones **122A** (1983) 89
Self-energy (see *Plasma, partially ionized*) **130A** (1985) 523
Self-energy (see *Scalar wave propagation*) **129A** (1985) 550
Self-energy (see *Scalar wave propagation*) **129A** (1985) 562
Self-gravitating system
– A covariant kinetic equation for a — - Kandrup **126A** (1984) 461
Self-oscillations
– — in classical dilute relativistic plasmas - Barcons **123A** (1984) 617
Semiclassical phase space function
– On semiclassical approximations to Wigner's phase space function - Springborg **126A** (1984) 259
Semiclassical representation method
– — in statistical physics of interacting molecules. II. Theory of open systems. Application to the theory of a single-mode laser taking into account the recoil effect – Gordov et al. **125A** (1984) 519
Semiconductors, degenerate (see *Metal–insulator phase transition*) **129A** (1985) 423
Senftleben–Beenakker effect (see *Viscomagnetic diffusion flux*) **126A** (1984) 66
Senftleben–Beenakker effect (see *Viscomagnetic diffusion*) **126A** (1984) 46
Senftleben–Beenakker effect (see *Viscomagnetic effect*) **126A** (1984) 82
– Experiments on the viscosity of some symmetric top molecules in the presence of magnetic and electric fields - Mazur et al. **121A** (1983) 457
Senftleben–Beenakker effects
– A classical dynamics study of — in nitrogen gas - Turfa et al. **129A** (1985) 439
Separable interactions (see *Quantum systems in equilibrium*) **121A** (1983) 59
Shear motion (see *Inviscid flow*) **125A** (1984) 150
Shear viscosity (see *Binary mixtures*) **122A** (1983) 212
– The effective — for two-phase flow - Bedeaux **121A** (1983) 345
Shifts dynamical systems
– Entropy functionals associated to the — - Martinez and Tirapegui **122A** (1983) 593
Sierpinski gasket (see *Fractal lattice*) **128A** (1984) 307
Sine-Gordon equation (see *Bäcklund transformations*) **123A** (1984) 319

Sine-Gordon equation (see *Nonlinear difference–difference equations*) **125A** (1984) 344
Single-link correlation function (see *One-dimensional non-linear systems*) **126A** (1984) 237
Single-mode laser
– Semiclassical representation method in statistical physics of interacting molecules. II. Theory of open systems. Application to the theory of a — taking into account the recoil effect - Gordov et al. **125A** (1984) 519
Single-particle distribution function (see *Solitary waves*) **129A** (1985) 577
Singlet density operator (see *Waldmann–Snider equations*) **128A** (1984) 447
Singlet-pair states (see *Antiferromagnetic systems, linear*) **130A** (1985) 155
Singular integral equations (see *Bäcklund transformations*) **123A** (1984) 319
Site-bond percolation, correlated
– Correlated site-bond percolation for multicomponent spin models - Moraal **122A** (1983) 313
Six vertex model
– Eigenvectors of the multi-component generalization of the — - Schultz **122A** (1983) 71
Sixteen vertex model
– Diagrammatic construction of an irreducible basis of algebraic invariants for the — - Schram and Hijmans **125A** (1984) 58
– On the bifurcations occurring in the parameter space of the —. I. Discrete bifurcations - Hijmans and Schram **121A** (1983) 479
– On the bifurcations occurring in the parameter space of the —. II. Bifurcations arising from degeneracies in the **N**-matrix - Hijmans and Schram **125A** (1984) 25
– On the classification of the homogeneous 16-vertex models on a square lattice. I. Connection with the boson Bogoliubov transformation - Colpa **125A** (1984) 425
– On the classification of the homogeneous 16-vertex models on a square lattice. II. Connection with a new type of phase transition-Colpa **125A** (1984) 442
– Simplified bifurcation analysis of the — , based on the standard representation of equivalence classes of models - Hijmans **130A** (1985) 57
Size distribution function (see *Magnetization switching in a 1-D system*) **125A** (1984) 261
Size distribution function (see *Magnetization switching*) **128A** (1984) 132
sl (2,R) ⊗ I (see *Fokker–Planck equation*) **128A** (1984) 520
sl (2,R) ⊗ Weyl algebra (see *Fokker–Planck equation*) **128A** (1984) 520
Smectic A–C phase transition
– The mean-field type phase transition from smectic A to smectic C - Rosciszewski **127A** (1984) 634
Smoluchowski equation (see *Diffusion species*) **122A** (1983) 547
Smoluchowski equation (see *Diffusion-controlled reactions*) **129A** (1985) 514
Smoluchowski equation (see *Inertial corrections in diffusion*) **125A** (1984) 1
Solid–liquid interface (see *Two-phase systems*) **121A** (1983) 1
Solids (see *Electric conduction*) **121A** (1983) 552
Solids (see *Heat conduction*) **121A** (1983) 552
Solitary waves
– Initial conditions in non-equilibrium statistical mechanics. I. The generation of — from discontinuities - Muriel **129A** (1985) 577
Sound absorption (see *Hydrogen isotopes*) **122A** (1983) 173
Space group representation (see *Incommensurate crystal phases*) **126A** (1984) 163
Space groups
– Comments on the paper: "Active representations of — based on the simple cubic lattice" by H. Kunert and M. Suffczyński - Davies and Dirl **127A** (1984) 677
Spatial coordinate-dependent moments (see *Fokker–Planck equation*) **125A** (1984) 607
Spatial gradients (see *Extended irreversible thermodynamics*) **128A** (1984) 535
Specific heat (see *Continuous-spin systems*) **130A** (1985) 412

Spectral characteristics (see *Heat bath*) **127A** (1984) 218
Spectral density (see *Duffing oscillator*) **123A** (1984) 481
Spectral density method (see *Fermion elementary excitations*) **123A** (1984) 279
Spectral function (see *Two-atom Hanle-type resonance spectra*) **125A** (1984) 398
Spectral transition lines (see *Waldmann–Snider equations*) **128A** (1984) 447
Spherical atoms (see *Dipole–dipole dispersion forces*) **125A** (1984) 591
Spherical scatterers (see *Array of scatterers, disordered*) **129A** (1985) 550
Spherically symmetric inclusions (see *Random medium*) **125A** (1984) 381
Spin density
– Spin and torsion in the very early universe - Bäuerle and Haneveld **121A** (1983) 541
Spin-flip dynamics (see *Becker–Döring equation*) **127A** (1984) 681
Spin glasses (see *Frustration in local environment*) **123A** (1984) 605
Spin-glass phase (see *Ising model, random-bond*) **125A** (1984) 321
Spin-glass state (see *Bond-random Ising model*) **122A** (1983) 483
Spin–lattice models
– Transfer tensor method applied to translation invariant models - Sobotta **130A** (1985) 254
Spin–lattice models
– Transfer tensor method in statistical mechanics - Sobotta **129A** (1985) 343
Spin–lattice relaxation
– Deuteron – of a tunnelling tetrahedral four spin $I = 1$ system - Van der Putten and Trappeniers **129A** (1985) 302
– Proton — of a tunnelling CH_2D_2 molecule - Van der Puttern and Trappeniers **129A** (1985) 327
Spinodal decomposition (see *Phase separation*) **122A** (1983) 13
Spin-one Ising model
– A — on the Bethe lattice - Chakraborty and Morita **129A** (1985) 415
Spin-one system
– A model for quenching via hidden variables; non-equilibrium behaviour of a system with two long range order parameters - Keskin and Meijer **122A** (1983) 1
Spin operator diagram technique
– Spin waves in the easy-plane ferromagnets - Garanin and Lutovinov **126A** (1984) 416
Spin-$\frac{1}{2}$ particle
– On the non-relativistic limit of a — in a classical gravitational field - Bäuerle and Twelker **130A** (1985) 553
Spin systems
– — in contact with thermostat – kinetic model - Piotrowski **121A** (1983) 135
Spin-wave model (see *Antiferromagnetic systems, linear*) **130A** (1985) 155
Spin waves (see *Easy-plane ferromagnets*) **126A** (1984) 416
Spinor correlation functions
– Modulated phases in Ising models with diluted frustration - Rijpkema and Knops .. **122A** (1983) 489
Spontaneous breakdown (see *Quantum field theory*) **128A** (1984) 427
Spontaneous emission
– Gauge independent Wigner function approach to — and to quantum kinetic equations - Badziag **130A** (1985) 565
Spontaneous magnetization (see *Decorated Ising model*) **127A** (1984) 587
Spontaneous magnetization (see *Ising model*) **130A** (1985) 194
Spontaneous radiation (see *Dicke-type model*) **128A** (1984) 82
Square lattice (see *Sixteen vertex model*) **125A** (1984) 425
Square lattice (see *Sixteen vertex model*) **125A** (1984) 442
– Ising model with two-spin interactions and four-spin interactions on the — - Horigu-

chi. **130A** (1985) 194
S-state ions (see *Crystal fields, spin correlated*). **127A** (1984) 228
Stabilty and equilibrium (see *Infinite classical systems*) **128A** (1984) 351
Stark effect in hydrogen (see *Summation of perturbation series*). **128A** (1984) 589
Star-triangle equations
– Eigenvectors of the multi-component generalization of the six-vertex model - Schultz. **122A** (1983) 71
Statistical dynamics
– — of interacting kinks I - Kawasaki and Nagai. **121A** (1983) 175
Steady state random thermal motion (see *Debye limit*). **128A** (1984) 611
Steady states
– The role of thermodynamic representations in the study of fluids in far from equilibrium — - Garibay-Jiménez and García-Colin **130A** (1985) 616
Stereoisomers, gaseous
– An upper limit to the influence of chiral discrimination on some transport properties of gaseous stereoisomers - Breunese et al. **123A** (1984) 586
Stereospecific interaction (see *Stereoisomers, gaseous*). **123A** (1984) 586
Stochastic differential equation (see *Relaxation problem, exactly soluble*). **122A** (1983) 397
Stochastic differential equations, linear
– Some additional remarks on the cumulant expansion for linear stochastic differential equations - Roerdink. **123A** (1984) 369
Stochastic differential equations (see *Random physical process*) **123A** (1984) 261
Stochastic dynamical equations (see *Nuclear magnetic relaxation*). **122A** (1983) 413
Stochastic fluid equations (see *Hydrodynamic fluctuation forces*) **122A** (1983) 505
Stochastic motion (see *Explosive behavior*) **125A** (1984) 237
Stochastic nonlinear mean-field model
– On the dynamics of a — - Brey et al. **128A** (1984) 497
Stochastic oscillator (see *Finite correlation time effects*) **128A** (1984) 25
Stochastic perturbation theory (see *Damping of elementary excitations*) **123A** (1984) 625
Stochastic perturbations (see *Fluctuating medium*) **128A** (1984) 551
Stochastic predictions (see *Birth and death processes*) **128A** (1984) 377
Stochastic processes (see *Finite correlations time effects*) **123A** (1984) 99
Stochastic rotation operator
– Debye limit of the — - McConnell. **128A** (1984) 611
Stochastic spin–phonon model (see *Damping of elementary excitations*) **123A** (1984) 625
Stockmayer fluids (see *Liquid–vapour coexistence properties*). **126A** (1984) 289
Stockmayer particles (see *Dielectric properties*) **125A** (1984) 270
Strain field (see *Shear viscosity*) **121A** (1983) 345
Stress–strain constitutive relation
– Effective elasticity of a solid suspension of spheres. I. — - Jones and Schmitz **125A** (1984) 381
Subdynamics
– Relation between the kinetic equations in the — approach and the Boltzmann equation for inhomogeneous gases - Škarka **129A** (1984) 62
Sulfur-hexafluoride (see *PVT* properties) **126A** (1984) 384
Summation of divergent perturbation series
– A method for summing strongly divergent perturbation series: the Zeeman effect in hydrogen - Arteca et al. **128A** (1984) 253
Summation of perturbation series
– A method for — - Arteca et al. **128A** (1984) 589
Superconductivity, enhancement of (see *Metal–insulator phase transition*) **129A** (1985) 423
Superconductor (see *Superfluid Fermi-liquids*). **127A** (1984) 323

Superfluid Fermi-liquids
– The linear response functions for ^{3}He(B) and superconductors in the quasistatic London regime - Bogacz **127A** (1984) 323
Superspace groups (see *Incommensurate crystal phases*) **126A** (1984) 163
Superspace, two-dimensional (see *Kronig–Penney model*) **127A** (1984) 125
Surface energy transport (see *Surface reciprocal relations*) **125A** (1984) 302
Surface magnetization density (see *Thin film on a rough surface*) **125A** (1984) 75
Surface polarization (see *Thin film on a rough surface*) **125A** (1984) 75
Surface reciprocal relations
– On the implications of — for thermophoresis and photophoresis - Satten and Ronis. **125A** (1984) 302
Susceptibilities, second-order (see *Quantum systems in thermodynamical equilibrium*).... **121A** (1983) 85
Susceptibility (see *Two-level system*) **128A** (1984) 541
Susceptibility, generalized (see *Linear response*) **130A** (1985) 292
Suspension (see *Brownian particles, interacting*) **121A** (1983) 329
Suspension of hard spheres
– Diffusion in hard sphere suspensions - Felderhof and Jones **122A** (1983) 89
Suspension of spheres
– Effective elasticity of a solid —. II. Effective moduli in lowest multipole approximation - Jones and Schmitz **126A** (1984) 1
– The effective viscosity of a concentrated — (and its relation to diffusion) - Beenakker **128A** (1984) 48
Suspensions (see *Dispersions*) **122A** (1983) 286
Switched domains
– Kinetics of magnetization switching in a 1-D system II – long time behavior of — - Sekimoto **128A** (1984) 132
Symmetric top molecules (see *Viscosity*) **121A** (1983) 457
Symmetry breaking
– Competitive forms of — in linear antiferromagnetic systems - Càspers and Magnus . **130A** (1985) 155
Symmetry transformations (see *Wigner's theorem*) **127A** (1984) 599

Temperature jump coefficient (see *Fluctuations in finite systems*) **125A** (1984) 281
Tensor densities (see *Invariance conditions*) **126A** (1984) 371
Tensorial internal variable (see *Viscoanelastic media*) **125A** (1984) 640
Tetrahedal four spin I = 1 system
– Deuteron spin–lattice relaxation of a tunnelling — - Van der Putten and Trappeniers **129A** (1985) 302
– The *p–q* model Boltzmann equation - Futcher and Hoare **122A** (1983) 516
Thermal bath
– Radiationless transitions: when can a molecule serve as its own —? - Fain **122A** (1983) 363
Thermal conductivity
– — of three noble gases with carbon monoxide - Imaishi and Kestin **126A** (1984) 98
– — of methane with carbon monoxide - Imaishi and Kestin **126A** (1984) 301
Thermal conductivity
– — of two binary mixtures of gases of equal molecular weight - Imaishi et al. **123A** (1984) 50
Thermal conductivity (see *Hydrogen isotopes*) **122A** (1983) 173
Thermal creep coefficient (see *Fluctuations in finite systems*) **125A** (1984) 281
Thermal relaxation
– — of systems with quadratic heat bath coupling. I. Classical systems - Lindenberg and Cortés **126A** (1984) 489
Thermodynamic approach (see *Electric conduction*) **121A** (1983) 552
Thermodynamic approach (see *Heat conduction*) **121A** (1983) 552

Thermodynamic functions (see *Hydrogen, fluid*) **130A** (1985) 587
Thermodynamic functions (see *Unified theory*) **121A** (1983) 107
Thermodynamic limit
– Exact analysis of the fluorescent Dicke model in the — - Khandekar et al. **130A** (1985) 323
Thermodynamic properties (see *Inhomogeneous fluids*) **121A** (1983) 399
Thermodynamic properties, liquid phase (see *Non-axial molecular fluids*) **121A** (1983) 563
Thermodynamic representations
– The role of — in the study of fluids in far from equilibrium steady states - Garibay-Jiménez and García-Colín **130A** (1985) 616
Thermoelectric transport coefficients (see *Ionized plasma, partially*) **128A** (1984) 643
Thermophoresis
– On the implications of surface reciprocal relations for — and photophoresis - Satten and Ronis **125A** (1984) 302
Thermostat interacting with spin systems
– Spin systems in contact with thermostat – kinetic model - Piotrowski **121A** (1983) 135
Thin film on a rough surface
– Optical properties of thin films on rough surfaces - Wind and Vlieger **125A** (1984) 75
Thomas–Fermi equation
– Statistical model of an atom in electron scattering calculations - Jablonski **129A** (1985) 591
Three-dimensional cubic crystals (see *Lattice dynamics*) **128A** (1984) 427
Three-level atom (see *Two-photon resonance fluorescence*) **121A** (1983) 309
Three-level atoms
– Cooperative and interference effects in the resonance fluorescence of two identical — at high photon densities. II. Numerical results - Mavroyannis **127A** (1984) 407
Three-state chiral clock model
– Melting and wetting transitions in the — - Huse et al. **121A** (1983) 363
Time-convolutionless equation (see *Exciton migration*) **128A** (1984) 551
Time correlation functions (see *Ising chain*) **123A** (1984) 1
Time-reversal symmetry (see *Dynamical systems, model*) **122A** (1983) 345
– Fluctuations in finite systems: —, surface Onsager reciprocal relations and fluctuating hydrodynamics - Satten and Ronis **125A** (1984) 281
Topological defects
– Dynamics of — in critical binary fluids, metamagnets and ^{3}He–^{4}He mixtures - Ohta et al. **128A** (1984) 1
Torsion
– Spin and — in the very early universe - Bäuerle and Haneveld **121A** (1983) 541
Transfer matrix renormalization, self-dual (see *Potts model, triangular*) **123A** (1984) 577
Transfer matrix (see *Cubic model, n-component*) **129A** (1984) 1
– Diagonalization of the — of a nonintersecting string model - Perk and Schultz **122A** (1983) 50
Transfer tensor method
– — applied to translation invariant models - Sobotta **130A** (1985) 254
– — in statistical mechanics - Sobotta **129A** (1985) 343
Transformation properties (see *Relativistic thermomechanics*) **127A** (1984) 282
Transient bimodality (see *Explosive behavior*) **125A** (1984) 237
Transition rate (see *Kramers method, generalized*) **130A** (1985) 205
Transition regime
– Theory of field effects on transport properties of polyatomic gases in the — - Mason and Mazur **130A** (1985) 437
Transition temperature (see *Decorated Ising model*) **127A** (1984) 587
Transition temperature (see *Vortex unbinding transition*) **129A** (1984) 40

Translation invariant models
– Transfer tensor method applied to — - Sobotta **130A** (1985) 254
Transmission line (see *Membrane–particle coupling*) **129A** (1985) 503
Transmittance (see *Thin film on a rough surface*) **125A** (1984) 75
Transport coefficients (see *Nonuniform molecular gases*) **121A** (1983) 430
Transport coefficients, generalized
– Generalized transport coefficients of an *N*-component fluid application to the hydrogen plasma - Bernu **122A** (1983) 129
Transport equations (see *Kinetic theory*) **121A** (1983) 1
Transport properties (see *Stereoisomers, gaseous*) **123A** (1984) 586
– Theory of field effects on — of polyatomic gases in the transition regime - Mason and Mazur **130A** (1985) 437
Trap pair correlation function (see *Interactions, cooperative*) **128A** (1984) 571
Tricritical behaviour (see *Blume–Capel model*) **130A** (1985) 367
Tricritical phenomena (see *Metal–insulator transition*) **122A** (1983) 252
Tricritical temperature (see *Fisher's alternate-site lattice gas model*) **126A** (1984) 25
Tunnel splitting (see CH_2D_2 *molecule*) **129A** (1985) 327
Tunnel splitting (see *Tetrahedal four spin I = 1 system*) **129A** (1985) 302
Tunneling decay, activated
– Activated tunneling decay of metastable state: solution of the Kramers problem - Mel'nikov **130A** (1985) 606
Twistor space
– —, Minkowski space and the conformal group - Van den Broek **122A** (1983) 587
Two-atom Hanle-type resonance spectra
– — at high photon densities. II. Numerical results - Mavroyannis **125A** (1984) 398
Two-component fluids (see *Nonequilibrium fluctuations*) **126A** (1984) 443
Two-dimensional electron gas
– Retarded transverse current–current response functions of a — - Toyoda et al. **127A** (1984) 529
Two-dimensional hydrodynamic systems
– Fluctuation effects in — - Khalatnikov et al. **126A** (1984) 135
Two-dimensional lattice (see *Quadrupoles, reorientable*) **128A** (1984) 318
Two-dimensional, periodic channels (see *Effective diffusion coefficient*) **128A** (1984) 565
Two-dimensional planar model
– Renormalization and quantum effects in a — - Šimánek and Stein **129A** (1984) 40
Two-level atoms (see *Dicke model*) **130A** (1985) 323
Two-level system
– Dynamics of two-photon processes in a — - Bogolubov Jr. et al. **130A** (1985) 273
– The dynamics of the — in glasses - Vujičić and Plakida **128A** (1984) 541
Two-phase bubbly flow
– Virtual mass in — - Geurst **129A** (1985) 233
Two-phase composite
– Bounds for the complex dielectric constant of a — - Felderhof **126A** (1984) 430
Two-phase flow
– The effective shear viscosity for — - Bedeaux **121A** (1983) 345
Two-phase systems
– On the derivation of dynamical equations for systems with an interface. III. The solid–liquid interface - Ronis **121A** (1983) 1
Two-photon processes
– Dynamics of — in a two-level system - Bogolubov Jr. et al. **130A** (1985) 273
Two-photon resonance fluorescence

– Quantum beats in the — of a three-level atom - Cheung **121A** (1983) 309
Two-spin interactions (see *Ising model*) **130A** (1985) 194

Unified theory
– Molecular foundation of a — for the isotropic and nematic or cholesteric phases of liquid crystals - Pardowitz and Hess **121A** (1983) 107
Unitary transformations
– —, Weyl's association and the role of canonical transformations - Balazs and Jennings..... **121A** (1983) 576
Universe, very early
– Spin and torsion in the very early universe - Bäuerle and Haneveld..... **121A** (1983) 541
Unstable states in bistable potential, decay of
– Decay of unstable states: examination of the scaling theory - Zheng **122A** (1983) 431
Unswitched domains
– Kinetics of magnetization switching in a 1-D system – size distribution of — - Sekimoto..... **125A** (1984) 261

Van der Waals interaction (see *Hydrodynamic fluctuation forces*) **122A** (1983) 505
Van Kampen–Case treatment (see *Vlasov equation*)..... **127A** (1984) 473
Vapour pressure (se *Liquid–vapour coexistence properties*)..... **126A** (1984) 289
Variational approach
– Sodium melting curve calculation. I. — limitations - Angelie and Pelissier..... **121A** (1983) 207
Velocity autocorrelation function (see *Brownian motion, two-dimensional*)..... **127A** (1984) 363
Velocity autocorrelation function (see *Lorentz gas*) **121A** (1983) 523
Velocity autocorrelation function (see *Quantum Lorentz gas*)..... **125A** (1984) 163
Velocity correlation function (see *Brownian motion*)..... **126A** (1984) 152
Velocity correlation functions (see *Mutual pair motion*)..... **123A** (1984) 516
Velocity distribution function (see *Kinetic theory*)..... **125A** (1984) 497
Velocity field (see *Shear viscosity*) **121A** (1983) 345
Velocity relaxation (see *Rayleigh gas*) **127A** (1984) 194
Vertex models (see *Nonintersecting string model*)..... **122A** (1983) 50
Vibrational spectrum (see *Fractal lattice*)..... **128A** (1984) 307
Vibrotor interaction potential
– Quantum calculations of rotational and NMR relaxation, depolarized Rayleigh and rotational Raman line shapes for H_2(HD)–He mixtures - Schaefer and Köhler..... **129A** (1985) 469
Virial coefficients (see *Non-axial molecular fluids*) **121A** (1983) 563
Virtual mass (see *Two-phase bubbly flow*) **129A** (1985) 233
Viscoanelastic media
– On the propagation of linear longitudinal acoustic waves in isotropic media with shear and volume viscosity and a tensorial internal variable. I. General formalism - Ciancio et al. **125A** (1984) 640
Viscoelastic effects (see *Brownian motion*)..... **126A** (1984) 152
Viscomagnetic diffusion
– The theory of viscous diffusion in the presence of a magnetic field -Breunese and Van Houten..... **126A** (1984) 46
Viscomagnetic diffusion flux
– Experimental investigation of the — Breunese et al. **126A** (1984) 66
Viscomagnetic effect (see *Polyatomic gases*) **130A** (1985) 437
– A comparison of data on the — , flow birefringence and depolarized Rayleigh line broadening - Mazur et al..... **130A** (1985) 505

– The transverse — in N_2 and N_2–noble gas mixtures in the near hydrodynamic regime - Breunese et al. **126A** (1984) 82
Viscosity (see Hydrogen isotopes) **122A** (1983) 173
– Experiments on the — of some symmetric top molecules in the presence of magnetic and electric fields - Mazur et al. **121A** (1983) 457
Viscosity, effective (see *Suspension of spheres*) **128A** (1984) 48
– Effective viscosity of dispersions approached by a statistical continuum method - Mellema and Willemse **122A** (1983) 286
Vlasov equation (see *Relativistic plasmas, classical dilute*) **123A** (1984) 617
– A generalization of the van Kampen–Case treatment of the — - Škarka and George . **127A** (1984) 473
Vlasov operator (see *Relativistic quantum plasma*) **127A** (1984) 388
Vlasov plasma
– On relativistic corrections in a — - Goldstein and Turski **127A** (1984) 549
Volume viscosity (see *Binary polyatomic–noble gas mixture*) **128A** (1984) 371
Volume viscosity (see *Neutrino gas, massive*) **127A** (1984) 627
Vortex unbinding transition
– Renormalization and quantum effects in a two-dimensional planar model - Šimanek and Stein **129A** (1984) 40
Vorticity motion (see *Inviscid flow*) **125A** (1984) 150
Vorticity (see *Two-phase bubbly flow*) **129A** (1985) 233

Waldmann–Snider equations
– On generalized — - Veguillas et al. **123A** (1984) 463
– On generalized —. II. $\hat{\Pi}$-subdynamics - Díaz Armentia et al. **128A** (1984) 447
Ward–Takahashi relations (see *Lattice dynamics*) **128A** (1984) 427
Water-lattice models
– Dependence of the phase diagram on the coupling parameters in — - Van Royen and Meijer **127A** (1984) 87
Weakly interacting particles (see *Particles, identical*) **121A** (1983) 617
Weakly-coupled plasma (see *Self-diffusion*) **123A** (1984) 549
Weak-neutral-current interactions (see *Nonequilibrium chemical systems*) **125A** (1984) 465
Wetting transition (see *Melting transition*) **121A** (1983) 363
Weyl's association (see *Unitary transformations*) **121A** (1983) 576
Wick theorem
– Finite-temperature correlations for the Ising chain in a transverse field - Perk et al. .. **123A** (1984) 1
Wigner function, gauge independent
– Gauge independent Wigner function approach to spontaneous emission and to quantum kinetic equations - Badziag **130A** (1985) 565
Wigner function (see *Quantum damped oscillator*) **130A** (1985) 353
Wigner regio (see *Hydrogen, fluid*) **130A** (1985) 587
Wigner solids
– — and diffusion controlled reactions in a regular array of spheres - Felderhof **130A** (1985) 34
Wigner's phase space function
– On semiclassical approximations to — - Springborg **126A** (1984) 259
Wigner's theorem
– Symmetry transformations in indefinite metric spaces. A generalization of — - Van den Broek **127A** (1984) 599
Wigner–Weyl formulation (see *Gaussian wave-packet representation*) **127A** (1984) 241

Xenon (see *Multiple scattering*) **126A** (1984) 116

X–Y model
– Quantum crossover behaviour of the — in a transverse magnetic field - Lukierska-Walasek **127A** (1984) 613

Yang–Baxter equations (see *Hubbard model*) **127A** (1984) 316

Zeeman effect in hydrogen
– A method for summing strongly divergent perturbation series: the — - Arteca et al. . **128A** (1984) 253
Zubarev approach (see *Linear reponse theory*) **128A** (1984) 643

Mathematical Physics VII

Proceedings of the VIIth International Congress on Mathematical Physics Boulder, Colorado, USA, August 1–10, 1983

[Physica 124A, Nos. 1–3]

Abelian Higgs model 79
Ablation front 481
AC Stark effect 617
*Algebra 357
Algebra of test functions 621
Algebraic geometry 29
Algebras of unbounded operators 127
Almost Mathieu equation 61
Almost periodic operators 61
Almost periodic potentials 575
Analyticity, extended 145, 146
Anderson localization 303
Anderson model 413, 603
Anderson's tight binding model 303
Anti-de Sitter space 219, 222, 301, 355
Antiferromagnet 527
Asymptotically flat gravitional fields 51
Asymptotic completeness 145, 269, 338
Asymptotic expansion of eigenvalues 212
Asymptotic freedom 453
Asymptotic localization of eigenvectors 212
Asymptotic observables 271
Asymptotic solutions 431
Asymptotic structure 325
Atiyah–Singer index density 35
Atiyah–Singer index theorem 29
Attractors 577
Automorphisms 621
Axial vector current anomaly 365

Background-field formalism 348
Background-field hypothesis 517
Bariev method 605
Baryon propagators 365
Bernouilli potential 181
Bethe-Ansatz methods 603
Bethe–Salpeter equations 145
Betti number 33
Bifurcation, of topology 485
Black holes 629
Bogoliubov Hamiltonian 468
Boltzmann equation 171
Boltzmann–Gibbs hypothesis 117
Boulder 103
Bound states 311, 614
Broadwell model 175
Brownian functional 399
Brownian motion 181, 399

C*-algebra methods 47
C*-algebras 471
C*-dynamical systems 471
Cantor set 537
Cauchy data, for Minkowski space 51
Cauchy problem 327, 419, 629
Canonical measure 1
Capillary wave 3
Chain, of propagators 550
Chaotic behavior 61, 262
Chapman–Enskog expansion 171
Characteristic exponent 189
Chiral symmetry 365
Choleski preconditioning 588
Classical complexes 33
Classical limit 561
Classical self-interactions 509
Cluster expansion 550
Cluster projections 279
Cluster states 279
Collective field 462
Combustion theory 481
Compactness condition 361
Complex analytic dynamics 193
Computer assisted proofs 196, 465
Computational synergetics 647
Conformal group 401
Conformal invariance 401
Coning problem 485
Conjugate-gradient method 484, 489
Constructive approach 449
Contour dynamical algorithms 647
Contractable loops 549
Cosmic censorship 325
Covariant sectors 362

Critical region 453
Critical phenomena 549
Critical point 653
Crystal growth 481
Crystal surfaces 6
Curie–Weiss 478

Decaying process 317
Decaying states 103
Degenerate interaction 115
Delocalized states 413
δ-interaction 12
Determining modes 577
Determining points 583
Determining sets 583
Deterministic limit 120
Devil's staircase 199
Differentiable dynamical systems 639
Differential geometry 29
Diffeomorphism 649
Diffusion 413
Diffusion constant 414
Dimension 639
Dimensional regularization 348
Dirac genus 40
Dirac's theory of constrained systems 54
Discontinuity surfaces 481
Discrete time dynamical systems 639
Dissipative solutions 29
Divergences in supergravity 347
Dolbeault complex 40
Drill shaft 485
Dynamically evolving grids 483
Dyson–Schwinger equation 168

E_7, non-compact 219
Edwards model 165
EGMZ model 219
Eigenvalue grouping 589
Einstein equations 325, 629
Elastic hard rods 115
Eleven dimensions 219
Elliptic problems 481
Elliptic solver 484
Energy conjecture 325
Enstrophy 579
Entropy 639
Entropy flux 172
Equilibrium states 471
Ergodic behavior 47
Ergodic measure 639
Essential self-adjointness 189
Euclidean field(s) 139, 403
Euclidean invariant measures 626
Euclidean path integrals 91
Euclidean quantum field theories 453
Euler equations 171
Euler number 36
Evolution semigroups 322
Exponential localization 191
Extended analyticity 145, 146
Extended supergravity 301, 543
Extrinsic curvature 51

Factor, type I 361
False vacua 222
Fast Fourier transform 486
Fast solvers 486
Feigenbaum's map 203
Fermion condensates 219
Fermions on the lattice 367
Ferromagnetic spin systems 165
Feynman Kac 419
Fields 357
Field theory in the Euclidean region 136
Field theory on Minkowski space 128
Finite element approximation 91
Fixed node approximation 427
Fixed point theorems 32
Floquet–Howland theory 613
Floquet multipliers 650
Floquet theory 535
Fluid dynamic equations 173
Fluid dynamics 171
Fluid physics 481
Fluid turbulence 521
Forced oscillations 649
Forward drift 510
Fractal dimension 577, 579
Fractional dimension 640
Fröhlich–Spencer technique 416
Front topologies 485
Frozen-formalism 54
Functional composition 259
Functional integral 91
Functional invariant set 587
Functional iteration 259

Gamow vectors 103, 320
Garbage collection 489

G. Gamow 103
Gas dynamics 481
Gauge boson 295
Gauged supergravity 301
Gauge fields 79
Gauge group 165, 189
Gauge invariant regularization 79
Gauge theories 165
Gauginos 294
Gauss–Bonnet theorem 36
Gaussian decay 304
Gaussian measure 400, 549
Generalized Bloch condition 202
Generalized eigenvectors 103, 317
Generalized functions 400
Generalized ice model 606
General relativity 325
General relativity, Hamiltonian description 51
Gibbs distribution 117
Global Cauchy problem 331, 332
Global stability 301
Glueball(s) 296, 495
Gluino 293
Gluons 365
Goldstino 293
Grashof 579
Gravitational field theory 301
Gravitational radiation 629
Gravitino 295
Green's function(s) 91, 413
Gross–Neveu model 603
GUT 219

Hadrons 365
Hamiltonian dynamics 431
Hamiltonian equations 432
Hardy class functions 317
Hardy class vectors 105
Harper's equation 203
Hausdorff dimension 577, 641
Heat conduction 303
Heisenberg dynamics 471
Heisenberg model 458
H-function 172
Hermaphrodite mass 296
Hidden sector 294
Higgs 293
Higgs fields 83, 189
Higgs–Kibble symmetry breaking 219
Higgs model 79
Higher dimensional quantum field theory 98
Hirzebruch signature 37
Horseshoe crab 433
Hydrodynamic equations 115
Hydrodynamic limit 115
Hydrodynamics 115
Hyperbolic system 419
Hyperscaling relation 553
Hypertriangular lattices 525

Ice-like rule 603
Ideals 621
Ideals and states 621
Ideals in the algebra of test functions 133
Imaging of tensors 632
Implicit methods 587
Impurities in crystal 303
Infeld–Van der Waerden vectors 55
Infinite dimensional rotation group 401
Infinite range random interaction 523
Infinite systems 115
Infra-red superrenormalizibility 553
Inhomogeneous disordered medium 303
Initial data 629
Initial layer 175
Injected fluid 481
Instability of bound states 617
Integer moment problem 61
Interval arithmetic 465
Invasion of the Killing spinors 210
Inverse localization length 304
Irreversibility 172, 317
Ising model 47, 165, 523
Ising ferromagnet 1
Ising strip lattice 2
Isometry conditions 631

Julia set 61

Källén–Lehmann representation 551
Kaluza–Klein 219
Kaluza–Klein compactification 219
Kaluza–Klein mechanism 543
Kaplan–Yorke type 577
Kato–Kuroda theory 617
Kelvin–Helmholtz instability 482
Kernel functions 136
Killing spinors 219
Kinetic theory 171
Kinematic viscosity 577

KMS condition 471
Kolmogorov equation 562
Kolmogorov length 580
Kolmogorov theory 577
Krein space 189
Kronig and Penney's model 13
Kubo formula 199

Lagrange inversion formula 214
Landau singularities 147
Lapse 53
Laser fusion 481
Laser fusion pellet 481
Lattice approximations 81
Lattice gauge action 366
Lattice gauge theory 365
Lattice QCD 365
Lattice regularization 366
Law of large numbers 115
Limit sets 640
Linear organic conducting chains 61
Liouville equation 561
Local Cauchy problem 328
Local compactness 271
Local compactness property 614
Local equilibrium 116
Locality ideal 622
Localization phenomenon 182
Local martingale 189
Local mesh refinement 483
Local potentials 11
Local quantum physics 357
Local relativistic quantum physics 357
Lyapunov exponents 639
Lyapunov numbers 581
Lyapunov–Schmidt reduction 653

Magneto-hydrodynamic 579
Many-body problems 11
Many-body systems 21
Many-fermion problem 427
Markov process 181
Mass generation 79
Massive Thirring model 603
Mass spectrum 495
Mass spectrum calculations 365
Mathematical relativity 325
Maxwellian distribution 172
McDonald's card game 516
Meson propagators 365
MIMD approach 587
Mobility edge 304
Modons 547
Moment generating functions 64
Monte Carlo method(s) 365, 427
Morse equation 655
Morse-index theory 649
Morse theory 357, 653
Moyal equation 561
Multicluster decompositions 284
Multifingered nature of time 54
Multiparticle quantum mechanics 269
Multiplet shortening 225
Multiple well Schrödinger operators 211
Multiprocessors 587
Multivalued data 481
Multiwell problems 11
Mushrooming, of fingers 482

Navier–Stokes 171, 577
Navier–Stokes equation 124, 521
N-body Hamiltonian 311
N-body quantum systems 311
Nested subgaps 202
Net 359
Net of local algebras 357
N-extended superfields 347
Non-abelian symmetry 189
Non-connected kernel 159
Non-Gaussian fixed points 453
Non-holonomic singularity 154
Non-integrable phase factors 366
Non-linear evolution equations 327
Non-linear σ-model 458
Non-Monte Carlo methods 495
Non-separable singularities 151
Numerical diffusion 482
Numerical methods 481
Numerical simulations 365
Numerical simulators 481
Numerical solutions 521

Octonians 233
Oil recovery 481, 484
Oil reservoir problems 482, 484
O(n) models 165
Op*-algebra 471
Orbit 639
Osterwalder–Schrader axioms 79

Padé–Borel extrapolation 497
Parallel computers 587
Particles on lattice 303
Particle trajectories 115
Path integral 400
Path integral formulation 419
Path space measures 419
Pellet, laser fusion 481
Percolation theory 429
Period-doubling 259
Period-doubling bifurcations 465
Periodic differential operators 613
Periodic forcing 264
Periodic potential 199
Periodic solutions 649
Perturbation method for tunneling 211
Perturbations of the harmonic oscillator 618
Phase locking 264
Phase space 561
Phase space formulation of general relativity 51
Phase space localization 277
Phase space of general relativity 52
Phase transitions 1, 47
φ^4-field theory 165
Photinos 293
Physical topology 475
Physical triplets 320
Planckian sky 228
Planck scale 219
Poincaré invariant functionals 625
Poincaré polynomial 655
Poincaré supergravity 347
Pointed sphere 655
Point interactions 11
Poisson process 561
Polymers 11
Potts model 606
Power counting 553
Precondition 486
Preconditioned conjugate gradient method 587
Preconditioning schemes 482
Preon level 235
Prepotential 349
Primitive analytic structure 148, 149
Probability theory 400
Projective invariance 401
Projective topology 475
Propagator 419
Pure gauge 54
Putative surface 3
QCD 485
Quantized Hall conductance 199
Quantum chromodynamics 365
Quantum dynamics 399, 471, 613
Quantum field theory 91, 400
Quantum fluctuation 509
Quantum gravity 325
Quantum inverse scattering transform 603
Quark flavors 366
Quarks 365
Quasi *-algebras 471
Quasi-local algebra 360
Quasi-potential 535
Quasi-spin formulation 477

Random electrical networks 429
Random impurities 11
Random medium 249
Random potential(s) 181, 303, 575
Random resistance 429
Random Schrödinger operator 413
Random surfaces 165
Random variables 399, 400
Random walk 165
Rarita–Schwinger Lagrangian 220
Rayleigh–Taylor instability 482
Rectangle, in function space 465
Reflexive domain 473
Regular flow 174
Renormalization group 259, 481, 551
Renormalization group analysis 196
Replica breaking 523
Replica symmetry 528
Replicas 523
Resolvent 11
Resonance 11
Resonance states 317
Response profile 442
Rest points 653
Retinal network 439
Reynolds' number 583, 647
R-hadrons 296
Ricci-flattening torsion 233
Richardson extrapolation 93
Riemann problem 485
Rigged Hilbert space 103, 317
Rigorous renormalization group 453
R-invariance 294
Rotation number 536

Round S^7 224, 226
r-particle irreducible kernel 145

Scaling 259
Scaling laws hypothesis 551
Scaling limits 453
Scaling relation 551
Scattering 11
Scattering states 614
Scattering theory 269, 337
Schrödinger operators 11, 181
Schwinger functionals 621
Schwinger model 79
Secondary and tertiary oil recovery 481
Secondary oil recovery 481
Sectorial structure of Wightman functions 136
Self-similar structures 61
Separable 151
Seven-sphere 219
Shape resonances 215
Sherrington–Kirkpatrick model 523
Shift 53
Shock discontinuity 173
Shock layer 176
Shocks 481
Shock tracking methods 483
Short range expansions 11
σ-model 33
Singularity structure 146
Singular sites 415
Small-scale structure 521
S-matrix poles 107
Smooth Markovian diffusion 510
SO (1,10) Lorentz invariance 220
Space invader 228, 235
Space invaders scenario 228
Species doubling 365
Species problem 367
Spectral gaps 535
Spectrum 11
Spectrum ideal 621
Spin glass(es) 523, 527
Spinning holes 635
Spontaneous compactification 221, 543
Spontaneous magnetization 1
Squashed S^7 223, 226
S^7 solutions 219
Stability of bound states 617
Stability domains 193
Staggered vertex systems 603
Stationary scattering theory 613
Steinmann relations 148
Stochastic acceleration 249
Stochastic differential equations 562
Stochastic evolution 115
Stochastic flows 561
Stochastic mechanics 510, 561
Stochastic methods 22
Stochastic point interactions 15
Stochastic process(es) 249, 400, 509
Strict exit set 654
Strict positivity 145
Strong coupling expansions 495
Structure theory of Wightman functionals 131
Subharmonic solutions 649
Superattractive cycles 262
Supercharge 33
Supergravity 219, 220, 294, 301
Super-Higgs effect 229
Superspace–superfield methods 347
Superstring theories 543
Supersymmetric regularization 347
Supersymmetric Yang–Mills 347
Supersymmetry 29, 219, 293
Superunification 219
Superunification, from eleven dimensions 219
Surface structure 1
Sympletic maps 649

Taylor–Green vortex 521
Tertiary oil recovery 481
Test functions 621
Thermal fluctuations 510
Thermal representations 475
Thermodynamical limit 471
Thermodynamic limit 550
Thermohydraulic 578
Three-dimensional crystals 11
Tight binding model 413
Time evolution 561
Time-focused sequence 481
Time periodic systems 613
Todd genus 40
Topological invariant 199
Topological quasi *-algebra 471
Torons 498
Transducers 435
Transfer matrix 603
Transient estimation 427
Transonic flow 481

Triality 224
True vacua 222
Tunneling parameters 222
Turbulence 577
Turbulent flow 521
Two-cluster parts 272
Two-dimensional electron gas 199
Two-phase flow 481, 482

Ultraviolet regularization 550
Ultraviolet stability 79
Unbounded operators 471
Unified field theory 543
Universality 551
Unstable fingering 485
Unstable shock front 481

Vacuum stability 301
Vector architecture 587
Vector computers 587
Vertex systems 603
Virtual quark loops 366
Virtual states 317
Visual environment 434
Visual nerve networks, integral equations of 431
Vortex motion 521

W*-algebras 471
W*-dynamical system 471
Ward identities 37
Wave operator 341
Waves in inhomogeneous media 303
Weak coupling expansion 495
Weak stability 193
Weyl curvature 58
Weyl gravitino 545
Weyl operators 562
Weyl tensor 223
Whiskers 409
White noise analysis 399
Wick ordering 550
Widom's scaling hypothesis 5
Wiener–Hopf 438
Wiener integral 561
Wiener measure 419
Wightman axioms 79, 130
Wightman functionals 130, 621
Wightman states 136
Wigner functions 561
Witten equation 55
Wu anomaly 1

XY model 47

Yang–Mills group 544
Yang–Mills Hamiltonian 189
Yang–Mills spectrum 498
Yano killing tensors 231

Zero energy resonance 16

current topics in materials science

edited by **E. Kaldis,** Laboratorium für Festkörperphysik ETH, Zürich, Switzerland.

These volumes cover many highlights of the last 20 years research in materials science, but also important topics which have been rather neglected up to now. They present a well-balanced combination of reviews dealing with applied and fundamental research, theory and experiment. Some of the reviews included are conceived as a standard all round presentation of their subject, whereas others concentrate on some important facets of a large topic. Special attention has been given to overcome language barriers and to present the work of a really international team of authors from the best materials research laboratories of Europe, USA, the USSR and Japan.

Volume 12

1985 viii + 472 pages
Price: US $101.75/Dfl. 233.75 ISBN 0-444-86928-x

CONTENTS: Preface. 1. Metallic, Ionic and van der Waals Clusters *(K. Sattler)*. 2. Metastable Phases in the Bulk and on Substrates *(R. Kern)*. 3. Vapor Pressure Investigation of P-T-X Phase Equilibria and Non-Stoichiometry in Binary Systems *(J.H. Greenberg and V.B. Lazarev)*. 4. Mechanical Properties of Brittle Materials - Modern Theories and Experimental Evidence *(W. Pompe, H.-A. Bahr, G. Gille, W. Kreher, B. Schultrich and H.-J. Weiss)*. Subject Index. Materials Index. Cumulative title index - volumes 1–12.

Volume 11

1984 viii + 460 pages
Price: US $96.25/Dfl. 250.00 ISBN 0-444-86833-x

CONTENTS: Preface 1. High temperature solution growth of garnets: theoretical models and experimental results *(P. Görnert and F. Voigt)*. 2. Substrates for epitaxial garnet layers: crystal growth and quality *(D. Mateika)*. 3. Growth and properties of iron borate, $FeBO_3$ *(R. Diehl, W. Jantz, B.I. Nölang and W. Wettling)*. 4. Single crystals of lanthanum hexaboride: preparation, properties and applications *(M.M. Korsukova and V.N. Gurin)*. Subject Index. Materials Index. Cumulative title index – volumes 1–11.

Volume 10

1982 viii + 497 pages
Price: US $119.25/Dfl. 280.00 ISBN 0-444-86321-4

CONTENTS: Preface. *Chapters:* 1. Diataxy (graphoepitaxy) and other approaches to oriented crystallization on amorphous substrates *(E.I. Givargizov, N.N. Sheftal and V.I. Klykov)*. 2. SbSI and other ferroelectric $A^{V}B^{VI}C^{VII}$ materials *(E.I. Gerzanich et al.)*. 3. Nonstoichiometry of inorganic solids *(W. Albers)*. 2. Spectroscopy, structure and bonding of high-temperature metal halide vapor complexes *(G.N. Papatheodorou)*. 5. Gem materials, natural and artificial *(I. Sunagawa)*. Subject Index. Materials Index. Cumulative Indices volumes 1–10.

Volume 9

1982 viii + 514 pages
Price: US $110.75/Dfl. 260.00 ISBN 0-444-86274-9

CONTENTS: Preface. *Chapters:* I. Wide Gape II-VI Compounds as Electronic Materials *(H. Hartmann, R. Mach and B. Selle)*. Sections: 1. Introduction. 2. Description of Close-Packed Structures. 3. Identification and Crystal Structure Determination of Polytypes. 4. Origin of Long Period Polytype Structures. 5. Structural Transformations in Polytypic Materials. 6. Conclusion. II. Polytypism in Close-Packed Structures *(D. Pandey and P. Krishna)*. Sections: 1. Introduction. 2. Materials Properties. 3. Applications. 4. Material Preparation. 5. Doping Problems. 6. Conclusions. 7. Appendix.

Volume 8

1982 viii + 494 pages
Price: US $117.00/Dfl. 275.00 ISBN 0-444-86273-0

CONTENTS: Preface. *Chapters:* 1. Laser Annealing of Semiconductors: Mechanisms and Applications in Microelectronics *(M. Wittmer and G.A. Rozgonyi)*. 2. Laser Annealing of Semiconductors *(M. Bertolotti and G. Vitali)* 3. Synthesis and Crystal Growth of some Inorganic Superconductors *(R. Madar)*. 4. Diffuse X-Ray Diffraction and its Applications to Materials Research *(H. Schulz)*. 5. High-Pressure Ammonolysis in Solid-State Chemistry *(H. Jacobs and D. Schmidt)*. 6. Solvent Effects in Crystallization Processes *(R.J. Davey)*. Indices.

Volume 7

1981 viii + 728 pages
Price: US $140.50/Dfl. 330.00 ISBN 0-444-86024-X

CONTENTS: Preface. *Chapters:* 1. Fundamental Aspects of Molecular Beam Epitaxy *(B.A. Joyce and C.T. Foxon)*. 2. Thin-Film Nucleation and Growth Theories; a Confrontation with the Experiment *(S. Stoyanov and D. Kashchiev)*. 3. Zinc Oxide, Properties and Behaviour of the Bulk, the Solid/Vacuum and Solid/Gas Interface *(W. Hirschwald et al.)*. 4. Current State of the Art of Hydrothermal Crystal Synthesis *(L.N. Demianets and A.N. Lobachev)*. 5. Thin Films from Organometallic Compounds *(L.A. Ryabova)*. 6. Thermodynamics and Imperfections in LEED Chalcogenides *(A.V. Novoselova and V.P. Zlomanov)*. Subject Index. Materials Index. Cumulative Title Index Vols. 1–7.

"... a range of significant subjects is reviewed by competent authors. ...any worker in the fields covered will find this volume useful, particularly for the many USSR references otherwise difficult to locate."

Ceramic Abstracts

Volume 6

1980 vii + 482 pages
Price: US $87.25/Dfl. 205.00 ISBN 0-444-85420-7

Volume 5

1980 viii + 482 pages
Price: US $104.25/Dfl. 245.00 ISBN 0-444-85389-8

Volume 4

1980 x + 596 pages
Price: US $108.50/Dfl. 255.00 ISBN 0-444-85348-0

Volume 3

1979 x + 692 pages
Price: US $129.25/Dfl. 305.00 ISBN 0-444-85245-x

Volume 1

1978 xii + 762 pages
Price: US $140.50/Dfl. 330.00 ISBN 0-7204-0708-7

Subscription Scheme

This series is available under a subscription scheme, offering a special discount of 15% on the list price of each volume.

FOR FURTHER INFORMATION PLEASE CONTACT THE PUBLISHER:

NORTH-HOLLAND PHYSICS PUBLISHING
P.O. BOX 103, 1000 AC, AMSTERDAM, THE NETHERLANDS
In the U.S.A. and Canada: Elsevier Science Publishing Co. Inc, 52 Vanderbilt Ave. New York, NY 10017

US $ prices are valid only in the USA and Canada. In all other countries the Dutch Guilder price is definitive.
Customers in the Netherlands, please add 5% B.T.W. In New York State, applicate sales tax should be added.
All prices are subject to change without prior notice.

P166NHa

NH PL

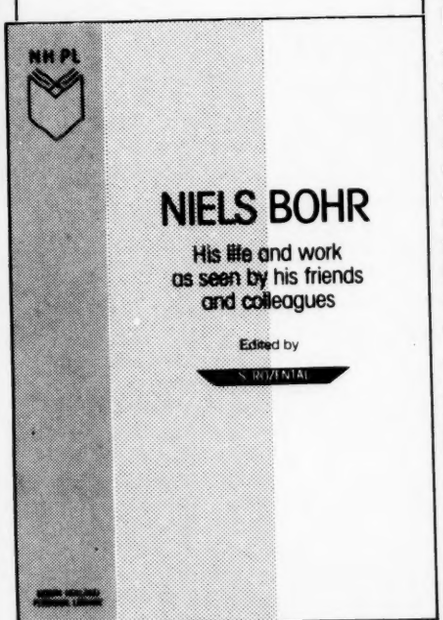
NORTH-HOLLAND PERSONAL LIBRARY

A series of reasonably priced monographs and contributed volumes intended for the individual physicist and materials scientist.

NIELS BOHR

His life and work as seen by his friends and colleagues

edited by S. ROZENTAL, *Niels Bohr Institute, Copenhagen, Denmark*



1967 repr. as a paperback 1985
vi + 355 pages
Price: US $24.95/Dfl. 75.00
ISBN 0-444-86977-8

This collection of essays on Niels Bohr was first published almost twenty years ago. The contributors, who all knew Bohr well, give a unique historical account of his life, his work, and his way of thinking.

The first part of the book covers the various periods of Niels Bohr's life and his scientific activities. The second part contains a number of contributions which give a picture of his varied interests and his activities in fields other than fundamental scientific research. Part three contains a few recollections of a more personal character.

The book concludes with a reprint of the Open Letter to the United Nations, published in 1950, which is a testimony of Bohr's concern for avoiding a world wide nuclear confict. In this document he has set out the ideas which were foremost in his mind in his later years concerning nuclear armament and which are still of topical importance.

CONTENTS: Introduction. Childhood and Youth. The Decisive Years 1911–1918 *(L. Rosenfeld and E. Rudinger)*. Glimpses of Niels Bohr as Scientist and Thinker *(O. Klein)*. Quantum Theory and Its Interpretation *(W. Heisenberg)*. Recollections from the Years 1929–1931 *(H.B.G. Casimir)*. Niels Bohr in the Thirties. Consolidation and Extension of the Concept of Complementarity *(L. Rosenfeld)*. The interest is focussing on the Atomic Nucleus *(O.R. Frisch)*. The Forties and the Fifties *(S. Rozental)*. The War Years and the Prospects Raised by the Atomic Weapons *(A. Bohr)*. Reminiscenses from the Post-war Years *(A. Pais)*. Niels Bohr and His Youngest Disciples *(J. Kalckar)*. Review of Niels Bohr's Research Work *(C. Møller and M. Pihl)*. Niels Bohr and International Collaboration *(V.F. Weisskopf)*. Niels Bohr and the Royal Danish Academy of Sciences and Letters *(J. Pedersen)*. Niels Bohr and the Danish Atomic Energy Research Establishment *(V. Kampmann)*. Niels Bohr and the Danish Community *(M. Pihl)*. Fifty Years of Friendship *(R. Courant)*. The Versatility of Niels Bohr *(P.A.M. Dirac)*. Science and Administration *(H.H. Koch)*. Memories of Tisvilde *(W. Scharff)*. An Impression *(M. Andersen)*. My Father *(H. Bohr)*. Open letter to the United Nations by Niels Bohr. Chronological Survey. List of Pictures.

A COMMENT FROM THE PRESS:

". . . It is a great strength of the book that in most of the contributions the scientific and factual are mixed with the personal so that a vivid portrait emerges gradually, like a statue seen from many points of view."

George Thomson, Contemporary Physics

North-Holland Physics Publishing
A division of Elsevier Science Publishers B.V.
P.O. Box 103, 1000 AC Amsterdam, The Netherlands
In the U.S.A. and Canada:
Elsevier Science Publishing Co. Inc.
52 Vanderbilt Ave., New York, N.Y. 10017

US$ prices are valid in the USA and Canada only. In all other countries the Dutch Guilder price is definitive. Customers in the Netherlands please add 5% B.T.W. All prices are subject to change without prior notice.

P199NH

NOTE TO AUTHORS

PHYSICA is published in four sections:

PHYSICA A *(Theoretical physics – Statistical physics)* contains papers on theoretical physics, with emphasis on statistical mechanics. Papers on experimental work on the statistical or collective behaviour of matter in the gaseous and liquid states also belong to this section. Theoretical physics is to be understood as the study of the theory itself and not as the interpretation of specific experimental results.

PHYSICA B *(Physics of condensed matter)* contains papers, both experimental and theoretical, in the realm of the physics of condensed matter. Articles on solid state physics and low temperature physics, e.g. superconductivity and properties of liquid and solid helium, should be submitted to this section.

PHYSICA C *(Atomic and molecular physics – Plasma physics – Optics)* contains papers dealing with free atoms, ions and molecules, with radiation, with the internal structure of atoms and molecules (spectroscopy in all wavelength regions except the gamma radiation region; collision physics), and with their interactions.

PHYSICA D *(Nonlinear phenomena)* contains papers and review articles reporting experiments, techniques and ideas which, although they may be derived and explained in the context of a particular field, advance the understanding of nonlinear phenomena in general. Contributions of this type in the recent literature have dealt with: wave motion in physical, chemical and biological systems; chaotic motion in models relevant to turbulence; quantum and statistical mechanics governed by nonlinear field equations; instability, bifurcation, pattern formation and cooperative phenomena.

PHYSICA A

Submission. Manuscripts should be sent in duplicate to one of the editors, either Professor Dr. H.W. Capel, Instituut voor Theoretische Fysica, Universiteit van Amsterdam, Valckenierstraat 65, 1018 XE Amsterdam, The Netherlands, or Professor Dr. I. Oppenheim, Massachusetts Institute of Technology, Department of Chemistry, room 6–221, Cambridge, Massachusetts 02139, USA. For rapid handling of manuscripts it is preferable that authors from the United States and Canda send their manuscripts to Professor Oppenheim, whereas authors from Western Europe are advised to send their manuscripts to Professor Capel.

Submission of a paper will be taken to imply that it represents original work not previously published, that it is not being considered elsewhere for publication, and that if accepted for publication it will not be published elsewhere in the same form, in any language without the consent of the editor.

The master copy and original drawings will be returned to the authors in case their paper is not accepted for publication.

Manuscripts should be written in English, French or German and typed with double spacing, wide margins and on one side of the page only.

The *title* should be concise and specific. When the length of the title exceeds 45 letters, a *running title* should be indicated. The name and address of the institute where the research was carried out should be stated with each author's name.

An *abstract* of not more than 150 words should be provided in English, summarizing the new information and the author's conclusions.

Keywords (five or less) should be provided for the subject index, and if possible the appropriate PACS classification codes.

References in the text should be numbered (e.g., "Jones and Smith[1]) have reported that...") and listed on a separate sheet stating the author, journal, volume and the year of publication (in brackets) and the number of the first page. Example. 1) S. Jones and P. Smith, Phys. Rev. **190** (1964) 2016.

Formulae should be clearly written. Vectors will be printed in bold-face italics (heavy, slanting type), and should be indicated by a wavy underlying in the type-script.

Special attention should be paid to characters that can be easily misread, such as i (lower case), I (cap.), l (el), 1 (one), ′ (prime); o (lower case), O (cap.), 0 (zero), ° (degree); u, v (vee), ν (Greek nu), V (cap.); $\times$, x, X; z, Z; p, P, ϱ (Greek rho); etc.

Drawings and any *lettering* should be done in Indian ink. Lines should be bold, the frame lines of graphs slightly finer than those of the plotted curves. The figures should be numbered and the captions listed on a separate sheet.

Alterations in the text cannot be permitted once the paper has been typeset. Authors may be charged for extra corrections resulting from their inattention.

Refereeing. All papers are subjected to refereeing, and in case a paper cannot be accepted in the form it was submitted, the submitting author will be informed about the referee's comments.

Acceptance. Acceptance forms will be sent by the editor. There is *no* page charge. Upon acceptance of an article by the journal, the author(s) will be asked to transfer copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information.

Reprints. 50 reprints of each article will be supplied to the first author free of charge. An order form for reprints will be provided with the author's proof. It should be returned to the publishers together with the manuscript and one corrected copy of the author's proof.